THE

AMERICAN FARMER:

DEVOTED TO

AGRICULTURE, HORTICULTURE AND RURAL ECONOMY.

[FIFTH SERIES.]

"O FORTUNATOS NIMIUM SUA SI BONA NORINT
"AGRICOLAS." . . . . . *Virg.*

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AUGUST.

"An August day! a dreamy haze
Films air, and mingles with the skies;
Sweetly the rich, dark sunshine plays,
Bronzing each object where it lies.
Outlines are melted in the gauze
That Nature veils: the fitful breeze
From the thick pine, low murmuring draws,
Then dies in flutterings 'midst the trees."

It is the season when all are seeking relief and rest. The weariness of long continued toil, and the oppression of summer heats and droughts, demand for us now more than our daily refreshment of sleep and food. The labourer seeks a longer rest in the shade—the farmer indulges more freely in the comforts of his well ordered home—the citizen of means seeks the mountain-top or the seashore, and while thousands toil on under force of circumstances, without this relief, all acknowledge its necessity.

And so it is, that every demand of our lower life reminds us of the requirements of the higher. What man of high or low degree, poor or rich, of labour or of leisure—however his daily life may be supplied with abundance, with comforts, with pleasures, does not come at last so to feel the pressure of this world's elements, that all these are not sufficient for him. He needs waters of refreshment that his springs cannot supply, and bread for nourishment that his fields cannot furnish, and rest that he cannot find. There is a "Good Shepherd" who has charge of a simple-minded flock; He "leadeth them beside the still waters" and maketh them "to lie down in green pastures." Let the world-weary bear it in mind; the "waters" are for the thirsty, the pastures for the hungry, the rest for the weary, and all for those who "have no power of themselves to help themselves."

WORK FOR THE MONTH.

TOBACCO.

This is the month which determines mainly the character of the Tobacco crop. The utmost care and diligence should be used, therefore, that it want no proper attention. The mere cultivation with plough or cultivator, is easy work after the team has been relieved of the corn cultivation. Keep the ground constantly stirred and perfectly clean until the leaves begin to lap. A well worked field of good Tobacco should exhibit not a weed or a bunch of grass when the crop is cut. If you have not yet given a second hoeing, it is important that it should not be delayed, and the cultivation should be completed with the hoe, leaving the ground well leveled and every sprig of grass demolished.

WORMS—TURKEYS.

Now you will have upon you the great enemy—the army of worms. Turkeys about the size of a small man's fist are at this time (the middle of July) selling briskly in the Tobacco-growing counties of Maryland at 75 cents apiece. We recollect when 40 cents was considered a good price. A good flock of turkeys, well managed by a woman and one or two children, are very effective, before the Tobacco and the worms get large. They should have always a feed of corn before being driven to the field. After ten o'clock, when the sun is hot, the worms hide, and the turkeys should be allowed to rest in the shade till toward the afternoon, being allowed in the mean while another moderate feed of corn. An old gobler of some experience is a very good "workey," when he takes kindly to the business. If he is disposed to strut and play the gallant, and make a fool of himself, *pull his tail out*, and he will go meekly to work like a sober citizen in plain clothes.

POISON FOR THE "HORN-BLOWER."

Having had several inquiries about the poison heretofore frequently recommended, we insert it here again, as very useful in preventing the worm by destroying the "blower," especially where it is used by a neighbourhood in concert:

In the February number of the *American Farmer*, pages 249-50, is given the following mode of using Cobalt for the destruction of "horn-blowers": The cobalt must be beat up into an impalpable powder—two or three ounces of this powder put into a half pint measure, and water and honey in equal parts added thereto. From three to six drops of the poison to be put in the Jamestown blossoms where they grow, and also in the seed heads of the tobacco in various parts of the field.

The mixture is liable to sour, in which case the "blowers" will not feed upon it. Keep it out of the way of the negro children.

But when the worms, notwithstanding turkeys and poison, have come in numbers and attain some size, there must be no trifling, and no expectation that anything will do but to catch them. If they are so large and numerous that they are doing their work of destruction very fast, go rapidly through, catching the larger ones first and taking the smaller at another turn.

TOPPING AND SUCKERING.

The work of topping will be done just as the plant is coming into bloom—topping down to leaves six inches in length early in the season, is the Maryland practice. Later in the season it should be topped still lower, that the top leaves may get good growth. The Tobacco will ripen well in about three weeks after being topped. In the meantime the "suckers" will start from the foot of each leaf, and should not be allowed to make much growth before they are taken out, as they suck away the juices that should go to give weight and body to the leaves. It is particularly important that before cutting, the suckers be carefully taken out, as they will continue green in the house and stain and injure the leaf in curing.

POTATOES.

Continue to cultivate your fall Potatoes until they come into bloom, and leave them clean.

RUTA BAGA AND WHITE TURNIPS.

Sow the first named quickly. On well manured and well prepared ground it makes a heavy and valuable crop. Sow other sorts from the 10th to the 20th. The Ruta Baga should be sown on slightly raised ridges. Peruvian Guano and well ground bones—one hundred weight of the former to two of the latter—300 pounds to the acre, makes a good dressing, or the same quantity of Peruvian and Mexican, mixed. If put in the ridges, do not allow it to come in contact with the seed. If you apply the manure broadcast, a hundred weight more should be applied.

RYE.

If you have Rye to sow, the ground should be got in readiness this month, the earlier the better, and manure and seed got in readiness to sow about the first of September. On any tolerable land, however, if you use manures or fertilizers, wheat will probably pay better.

PREPARATION OF FALLOW.

If you have a Fallow to prepare for Wheat, commence it at the earliest day you can. The objection to turning under a growth of clover originates, we think, in postponing the work too long, and not ploughing deeply enough. The earliest period after the clover is well matured is probably the best. It is then in a condition to decompose readily, and has the more time to become assimilated with the soil. The after working at seeding time, if the clover has been turned well under, leaves the seed bed compact and firm, an essential in wheat growing. If the clover remains until the stems are made hard in the sun and dry enough to burn, the decomposition is much more difficult, and the proper preparation much more uncertain. Independent, too, of theory, all experience is in favour of early ploughing. Another and important practical consideration is the risk of the ground becoming so hard that the work will have to be postponed too late.

After all that we have heretofore said, it is hardly necessary to press upon you the necessity of doing this work in the most thorough manner. No team less than three good mules or horses is sufficient to break a well-set clover sod, and we should not be satisfied with any depth less than eight inches, unless there is reason to fear some peculiarity of the subsoil likely to prove poisonous at first. Generally, we have little doubt that an inch of fresh subsoil, if you have a good supply of vegetable matter, will prove more useful to your crop of wheat than *some* of the fertilizers which are sold in the market. Give the ploughing your own constant supervision, that it be not slighted in any respect.

BUSHES AND BRIARS.

On a grain farm there will be leisure now to run over pasture and grass fields, and destroy bushes and briars. Mullein and other such weeds should be especially attended to before they ripen their seeds.

THRESHING GRAIN.

Whether you think it advisable to sell early or late, it will be proper to take advantage of the season between harvest and wheat seeding to get through the work of threshing. Let us warn

you again to have none but a careful, sober hand about the working part of your machine. When necessary to handle the working parts, unhitch the horses. Let no one but a very careful hand be allowed to put on or take off the belt. Have such a machine as will not allow the feeder's hands to come in contact with the teeth. Have a perfect, solid platform for the driver to stand upon.

TIMOTHY SEEDING.

Put your land early in a thorough state of pre-preparation—ploughing well and harrowing thoroughly, and be ready to sow early in September. It is a frequent practice to sow a crop of white turnips where you mean to sow Timothy. You may thus get a crop of turnips at no expense, except extra-manuring. It will be necessary however, to sow turnip seed very thinly, and have it well distributed, lest the Timothy be too much overshadowed.

Timothy growing should, in our opinion, however, be generally kept in a rotation with grain. No crop so soon infests the land with weeds, owing to the fact that before it is fit to cut many weeds which may be growing with it, ripen and scatter their seeds. By keeping it in a cleansing rotation of not too long duration this is avoided, while the crop is benefitted by a change. It is not at all too late to sow Timothy when it is proper to sow wheat, as it will not be expected of course to make a crop the first season. If we meant to sow for a crop of Timothy, unmixed with other grasses, we should sow on clover fallow immediately after the wheat is put in.

CATTLE PENS.

By all means have now, if you have not had heretofore, pens for yarding your cattle at night. Where a standing yard is not kept throughout the season, moveable pens should be made in the pasture field or on next year's cultivation, to be removed once a fortnight. At each removal cover the bottom of the new pen at once with litter of any sort you may have at command, to absorb the liquid voidings of the stock. Do not suppose it necessary when the pens are removed to plough them up to prevent waste by evaporation. By attention to these pens, and furnishing them with litter, much ground may be manured in the best manner without the cost of re-hauling. Take the opportunity of any leisure you may command to gather material for use during the busier fall season.

DRAINING.

This is a good season for ditching and cleaning land of superabundant water.

WORK IN THE GARDEN.

AUGUST.

SAVOYS, COLEWORTS, BORECOLE.

Plant Savoys as late as first week in the month —2 feet each way is now sufficient distance.

Early Yorks and other sorts may be planted out now to be used as Coleworts in Fall—seed may now be sown of the same to make delicate hearts for late fall use. Plant also best crop of Borecole.

RADISHES.

About the first of the month sow Radish seed, and they will be fit for use in September. Sow again about middle of month for later use.

TURNIPS.

Sow Turnips immediately if you have not done so for early use—your principal crop sow from 10th to 20th.

ASPARAGUS.

Keep Asparagus beds entirely clear of weeds, particularly new beds and seedlings.

SPINAGE.

Sow a small bed now and about the middle of the month for early use, and about the first of September prepare and sow for general crop to stand the winter. Sow this on light, warm and dry soil for better security against frost.

CELERY.

If not already done, plant out at once a full crop of Celery, according to directions given last month. Advancing crops of Celery should be earthed up every ten days. Break up the earth with the spade, and earth up only when it is quite dry, holding the stems up carefully together while earthing, so that the heart be not buried.

SMALL SALADING.

Sow now on a shady border, every week or so, Lettuce, Radish, Cresses, Mustard, &c., if you want a supply of small salading.

GREEN PEAS.

If you fancy a supply of Green Peas in October, sow early sorts from the first to the fifteenth of the month.

KIDNEY BEANS.

Kidney Beans of early sorts may also be sowed for fall use. If the ground is very dry, water the drills for Beans and Peas and soak the seed some hours in soft water.

LETTUCE.

Early in the month sow brown Dutch and Silesian Lettuce, and a succession crop about the middle of the month. About the last of the month sow seed of the brown Dutch and hardy green cabbage Lettuce to transplant into cold

frames and on warm borders, for winter and spring use.

ENDIVE.

In the early part of the month sow Endive seed for late autumn and winter use.

MELONS AND CUCUMBERS.

Keep these all clean while growing and fruiting.

HERBS.

Cut now such herbs as are in flower, for winter use or for distilling. Spread them in a shady place to dry.

THE ORCHARD.

Support such trees as are in danger of being broken down by fruit, with stakes, to which they must be bound with hay bands carefully, so that the bark be not chafed. Pick up carefully all decayed fruit that may drop, unless pigs have access to the orchard. Should trees show canker or much gum, cut out the decayed part clean to the fresh wood and treat the wound with the following medicated tar, as directed in the valuable work of McMahon, to which we are indebted for many valuable hints:

"*Medicated Tar for Fruit Trees.*—The medicated tar is composed of half an ounce of corrosive sublimate, reduced to a fine powder, and then put into a three pint earthen pipkin, with about half a gill of gin, or other spirit, stirred well together till the sublimate is dissolved. Then fill the pipkin by degrees with common tar, stirring constantly till the mixture is intimately blended. This quantity will be sufficient for two hundred trees."

The mixture being very poisonous, should be used with a great deal of care. While it affords complete protection to the wound, it yields to the growth of the bark, and though destructive to all insects, is by no means injurious to the tree.

THE NURSERY.

This is the season for budding. Peaches, Nectarines, Almonds, Apricots and other stone fruits are propagated by budding, and all may be budded this month, when the bark parts freely from the stalk. Let all young men learn now this simple and most useful art. Save stones of all stone fruit and put them in the ground at once or preserve them in moist earth.

AGRICULTURAL FAIR GROUNDS.—The York Co. (Pa.) Agricultural Society have made an addition of five acres to their Fair grounds. The additional land has been purchased from George F. Stine, and they have now twelve acres in all, which are to be handsomely improved by the planting of trees, &c.

FLORICULTURE—August, 1859.

Prepared for the American Farmer, by Wm. D. Brackenridge, Florist.

At this season of the year, it is of the highest importance to those having a mixed collection of soft-wooded plants, that the whole should be carefully examined, in order to ascertain how your stock stands with regard to number and condition of each individual; and when it is evident that the plants have become starved for the want of pot room, they should be shifted into larger ones at once, and cuttings put in, or layers made of such as may be wanted in greater numbers.

Towards the end of the month, all hard-wooded plants, as *Acacias, Diosmas, Myrtles*, &c., &c., should be shifted into larger pots, or, in many instances, it will only be necessary to top dress with fresh earth; choose cloudy weather to do this work, and when the operation of shifting and tieing up to stake is finished, replunge the pots in spent tan, sand or ashes—the last is the best.

Chrysanthemums, that have been raised by cuttings or division of the roots, and that have already had one shift, may now be moved into the pots in which they are to bloom; pinch back the points of the shoots for the last time, and arranging the plants, see and give them plenty of room, in order that they may branch out laterally; water freely at least twice every week, with liquid manure.

Pelargoniums.—If these have not been headed down, this work should not be longer delayed; cut back to within a few eyes of the previous year's growth, after which they should be kept rather dry for at least two weeks; then turn them out of the pots and shake off nearly all the old earth, prune the roots well back, and place them in pots at least one size smaller than that in which they bloomed; a compost to grow them in consists of two parts of well decayed loamy sods, the other two of rotted cow manure and sand in equal proportions. Cuttings of the tops placed in two-inch pots, in a compost of vegetable mould and sand, root freely if plunged in a spent hot-bed, and partially shaded for a few days, or until they make root.

Camellias.—The present is a good season in which to shift all plants that did not undergo that operation last spring. So soon as the work is done, place the whole in a shady situation, keep the roots moist, and syringe freely overhead until such time as cold nights set in. Take off such inarches as are well united.

Gloxinias and Archimenes.—The atmosphere in which these are grown should be kept moist, and the plants well supplied with water at the roots until such time as the foliage begins to decay, when watering should be discontinued by degrees altogether.

Euphorbeas, Cestrums, Habrothamnuses.—When these are wanted to bloom strong in winter, should now be kept in a growing condition by giving larger shifts, and by liquid manures.

Mignonette, Ten-week Stocks, and other annuals for winter bloom, should be sown without delay.

Cinerarias may now be propagated, either by division of the roots or by seeds.

Heliotropes and Scarlet Geraniums.—A few plants of these should be headed in, and shifted into light rich earth; such plants will bloom freely late in the fall.

Verbenas.—When plants for early winter flowering is wanted, the easiest way to get good plants well established is to fill a number of four or five inch pots with good earth, plunge these pots in the ground under the branches of such kinds as you may wish to secure, then peg down the branches to the surface of the pots, which they will not be long in filling with roots, when they may be cut away and tied up to stakes and placed away in a cold frame. But we prefer plants raised from cuttings for spring flowers; such cuttings can be put in any time before frosts overtake the old plants.

Calceolarias.—Sow seeds now of the herbaceous kinds; the shrubby sorts strike easily from cuttings in the fall, and will bloom well in spring.

Oxalises.—Fill a few pots now of the more showy kinds for early flowering.

Roses—In pots for winter blooms, should be pruned in and shifted into fresh soil. Those in the open grounds that have made strong shoots, may still be laid down to root; that class of Roses, known as Hybrid Perpetuals, do not as a general thing root freely by layering; while many kinds on the other hand throw out roots readily, by simply twisting the stem at the bend, where it is made to assume a vertical position, by being first pegged down and the earth pressed in behind; but the best way that we know of to produce a well rooted layer in the shortest time, is to pass a sharp knife half way through the stem upwards, so as to form a tongue from one to three inches in length, (according to the strength of the shoot;) this incision should be made in front, or opposite to where the bend or turn up is to be made, and when the peg is put down, the tongue, by gentle twist of the shoot, and bending of it upwards, is thrown in a free position past the side of the shoot or stem into the ground; this method has this advantage over the usual one, of making the tongue behind or on the side, of preventing the shoot operated upon from snapping or breaking at the incision when bringing it into an erect position, which is frequently the case, when the subject acted upon is young and tender. In the mode of making the incision we have described above, their is no necessity of putting in chips of wood, &c., &c., to keep the tongue free from the stem, as it will stand clear of itself, if the operation is properly performed.

Heathes and Epacreses.—Keep these in a cool partially shaded position, and see that they do not suffer for want of water.

Picotees and Carnations.—Continue to layer these as the grass progresses in length; make new beds of such layers as are already well rooted.

Phloxes may now be readily propagated by cuttings.

Pansies.—Make the first sowing for early spring blooms.

Dahlias.—Keep these well tied up to their stakes, and in dry weather stir up the ground around them well, then mulch with manure, and water freely at the root; clean away all suckers and lateral shoots that make their appearance within fifteen inches of the ground.

Shrubbery and Flower Borders.—Keep these clear of weeds by frequent deep hoeings; cut down to within three or four inches of the young leaves all decayed herbaceous plants, and trim into form all straggling shoots on the shrubs; roll the lawn and walks after a shower, and see to destroying nests of insects, and insects generally that are destructive to vegetation.

Management and Profits of a Flock of Merinos.

MONTROSE, CULPEPER CO., VA., June 5th, 1859.

To the Editors of the American Farmer:

GENTLEMEN: Having sheared my flock of Merinos, I am now able to afford your readers results likely to throw more light upon the question of the economy and profit of rearing that description of sheep, than any speculations on the subject I might be able to write.

Thus: My Merinos cost me an average of $6 per head, including an imported Silesian buck and three Silesian ewes, the former valued at $50 and the latter at $20 each. I purchased the flock last fall. Throughout the feeding season, I fed them daily an average of two bushels of oats (worth here 30 cents cash per bushel) to the 100 head, with as much wheat straw and cut and crushed cornstalks and blades as they would eat. The latter were generally moistened on being put in their troughs. Sometimes, instead of oats, I gave them corn meal, mixed with moistened wheat chaff, cut straw or cornstalks, at the rate of half a bushel of meal, per diem, to 100 head. I have made it a rule never to permit their fleeces to get wet, and, up to this hour, am careful to have them housed at night, in case—as last night—the weather is unusually cold for the season. Their house or shelter is a pen of straw rammed in between lines of rails a foot apart (for the walls) covered with loose straw, rising to an apex. In this they were gathered every night for nearly half the year. It is perfectly water-tight, and I am careful to secure the circulation of air through it. Once a week I cause crushed bones and ground plaster to be sprinkled on the droppings of the sheep and straw in it. As the bedding and droppings become too thick, I haul this manure out upon galls in my grass fields, first sprinkling on them clover and orchard grass seed and lightly harrowing them over. The consequence is (the season being favorable) wherever so dressed the galls are fast getting a fine orchard grass and clover covering. About the first of May I commenced folding the flock in the open air every genial night. To this end I use light hurdles made of pine poles, of perhaps an inch and a half to two inches in diameter, which hurdles are easily handled by a boy of fourteen years of age. At night a servant sleeps within a few yards of them, in a light shantee or watch house, built on wheels, in order to protect them from all intruders; a few bells upon them give notice of any stirring about in the hurdles when they should be at rest. They are of course thus folded on galls or portions of the field requiring most manuring. I permit them to rest three nights only on the same spot. The first night ere folding them I cause clover and orchard grass seed to be sprinkled where they are to lay. That night their little

hoofs harrow the seed in far better than that can possibly be done by the use of any machine. Next morning a light covering of straw is put upon the ground in the fold, and on that covering they lie two nights more, saturating it with their urine and leaving really an astonishing deposit of manure in it; for one who has not yet hurdled sheep will be surprised at the extent of their voidings in a single night. Wherever I have thus folded them, young clover and orchard grass is rapidly showing itself from beneath the straw.

Such is the manner in which I manage my sheep; my shepherd being an ordinary farm (black) hand, whose whistle they know and race after when hearing it, from a distance of hundreds of yards. In the day time, when grazing in a field bordering a young peach and apple orchard on one side, and an oat field on another side (without fences) they are in charge of little black children, ranging from five to eight years of age, who take turns in keeping them from straying where they should not go.

Now for results. 1st. My losses from casualties have been less than two per centum of the whole flock. 2d. I have been offered 33⅓ per centum on the original cost of the whole flock for my lambs of this season, which with their manure, as I avail my farm of it, will twice repay me, I am satisfied, for the services of their attendants (shepherd and negro children) and the oats, corn meal, straw, stalks and blades fed to them. The flock were sheared from the 23d to the 26th of May, a month or so earlier than is customary here, in order to avail me of the present prices of fine wool. Thus they have but eleven months fleeces on them. Their average yield of unwashed wool was 6¾ pounds, worth to-day from 40 to 50 cents per pound. Putting it at 40 cents per pound, though it is in better condition (cleaner) than unwashed wool usually is, the return of wool pays me 40 per centum in this first year on the original cost of the whole flock; or, on the value of the two fields on which I am now grazing them, at $50 per acre, and the original cost of the flock together, a little more than 8 per centum per annum. I may add, that I have grazed them in two fields—my poorest grass—three times as large as would have been necessary were the pasture good. Early in the season as they would nip the grass down, I moved them perhaps once in three weeks, commencing in February. For the last six weeks they have remained (grazed) in a single field, upon which the blue grass is spreading astonishingly, notwithstanding the opinion of some of my neighbours that to put sheep upon it, in its condition, would be an insurance against its proper improvement. The other field, though nipped down quite close six weeks ago, has to-day a growth of clover upon it as satisfactory as I could ask. I used them thus, as thickeners of the sod or grass, upon the principle on which those who essay to get lawns in good sod speedily, generally operate. Thus, they commence cutting, or rather shaving them down close to the roots early in the spring, when the growth is barely high enough to enable their keen shaving knives (they cannot be called scythes) to take off two or three inches; repeating the operation half a dozen times ere the approach of frost.

My Silesian buck, by the by, sheared 15¾ pounds of unwashed wool, and some of the ewes as high as 9 pounds each. All my wethers and most of my ewes that had lambed were found fat enough, on being sheared, for the butcher. Another important result is the fact that not a single blue-thistle or white (ox eye) daisy bloom is to be seen in either field in which my flock has pastured; though last year both were overrun with those two interminable pests. This is the case with the fields of my two nearest neighbours, who have likewise each a flock of Merinos, and with those of Mr. Slaughter Bradford, from whom we purchased. I should have felt well paid for the year's interest on the investment in this riddance of those two execrable nuisances, without a dollar's worth of wool from the flock. Had I pastured them on land in fine grazing condition, as before remarked, one-third as much land as I have devoted to them mainly, this season, would have been amply sufficient. I have sold none to the butcher so far, as I cannot yet spare him any.

It may be that Colonel Ware's Cotswolds have paid him better this season than my Merinos. If so, I congratulate him sincerely, and will gladly give my Merino flock away and purchase what he terms "mutton sheep," when satisfied that the latter will produce a per centage of profitable results over the Merinos, to compensate me for parting with mine after treating me so handsomely, as the practical man will see they have done.

I may not, inappropriately, add that I cut corn stalks and blades for the sheep, as for all the rest of my stock, with a Cummins' (Harrisburg, Pa.) Cutter, which also splits or crushes every stalk of half an inch diameter. I have freely bought a dozen different kinds of straw and stalk cutters in the last ten years, ranging in price from $20 to $50. The only one I have tried that really crushes the stalk is the one I now use, costing $35. It is driven by a Bogardus Cast Iron Horse Power, worked by two horses. I have owned the latter for ten years, during all which time it has been worked out of doors without a covering, and it is as valuable to-day as when I bought it for $60. I do all my wheat and oat threshing with it, using four horses to that end. For two seasons I sent it around with my thresher. Either servant on my farm can set it to drive thresher or cutter. I have in my barn yard a cistern such as I have used for ten years past, it being the third I have constructed, in that time, on the same plan. I dig a hole in the ground twelve feet deep and twelve feet square, and put on two coats of a composition of one-third hydraulic cement and two-thirds coarse sand. On the surface (rim) I lay sleepers of heart timber, one foot square, and cover with a double flooring of inch boards. The water of course comes from the roof of my barn, and is led into the cistern in wooden gutters. The cistern I constructed after this fashion, ten years since, on a farm I have since sold, is as serviceable to-day as when made, though from top to bottom the cement was daubed on a surface of large gravel, of rounded stones of from half an inch to two inches in diameter. The cost of digging, cementing, covering and guttering such a cistern cannot be more than from $25 to $35. Any one who may not have either a well or running water in his barn yard, will find such a cistern an invaluable as well as a very cheap means of obtaining an ample supply of water for

aught but the purposes of a very large stock. It will be remembered that the farmer only requires an ample quantity of water at the barn when the cattle are regularly housed. At that season there is usually rain or snow enough to keep an ample supply in such a cistern for the use of one's stock.

Yours, respectfully,

W. D. WALLACH,
Editor Washington Star.

[For the American Farmer.]

Insects.

Large numbers of insects, like other animals, obtain their nourishment from the vegetable and animal kingdoms; but a slight glance is sufficient to render evident, that their field of operation is much more extended than that of the others. While other animals appropriate for their subsistance but a limited portion of the exhaustless treasures of the vegetable kingdom, insects leave few if any of them untouched. From the gigantic banyan to the tiny moss, all constitute a medium for the exercise of their voracious appetites.

The root is bored and denuded of its bark by a countless host of them; the firm erect trunk is perforated in every direction by a still more numerous tribe; the branches are slit open, or mined through and through by a yet less limitable horde: even the leaves and stems are bereft of their tender skin, gnawed into shreds, or consumed entirely by a limitless class, whose devouring jaws never rest, and to whom vegetable nature is compelled to yield a forced obedience.

Many of these tiny organisms pass the greater part of their lives in those productions of the soil upon which we depend for subsistance; hence, they come in direct antagonism with one of the first principles of our being. Some attack the animals which minister to our comfort or pleasure, and by penetrating their skin, perforating their intestines, or bringing upon them dreadful disorders, shorten or destroy their lives. Others, again, direct their attacks against lordly man, and by irritating his skin, burrowing beneath it, investing his stomach and intestines, or piercing him with their sharp stings, render, even, his life uneasy, or shorten its duration.

All insects undergo, during some part of their existence, important changes called metamorphoses; these metamorphoses are three in number, and very often so alter their appearance and condition, as to make them appear like another set of beings. Many of them change the medium in which they live and from being a worm crawling about in the water, change to an insect with wings, capable only of living in the air. A large number having jaws in their first stage, transform to creatures with brilliant tints upon their wings, living by sucking honey from the flowers for their food.

The first transformation, called the larva state, consists in the drawing out, as it were, of the incipient being from a conglomerate mass of compacted fluids, contained in a thin membranous shell; this is the emerging of the young larva from the egg, corresponding to the infant state of the child. When first disclosed, its feeble organs act with but limited energy, and a little more time is required, to supply it with the necessary amount of strength. Unlike the child, however, its powers soon become invested with a forceful energy; its soft, delicate skin assumes a more indurated firmness, and then it is, that its incipient life is capable of battling with the circumstances that surround it.

In this condition it sometimes assumes the appearance of a headless worm without feet, wriggling about and propelling itself along by means of the rings of its body; at others it takes the form of the caterpillar and creeps about upon a number of short legs, and takes its food with a pair of powerful jaws; still at another it resembles a scale-shaped blotch, fastened upon a leaf, twig, or trunk of a tree; and yet, again, it may be a twig-like creature, moving about upon six long, slender legs, and scarcely differing, in appearance, from the stems and some other portions of the vegetable matter amongst which it lives.

These are but a few of the appearances which these wonderful beings present, but they are enough to show the great diversity which obtains amongst them, and to draw our minds to a consideration of their economies.

After continuing a certain space of time in the condition before mentioned, changing its skin a few times, and consuming the amount of food necessary, it arrives at another period of life, called the pupa or chrysalis state; in which it sometimes appears as a mummy, wrapped up in swathing bands of silk or hair, or like a case of shell, or it resembles either the foregoing or following stages of its existence.

In the first two conditions we find the large tribe of flies, butterflies and moths, and in the others we meet with an innumerable host, which may stand represented by the forms met with in the young dragonfly and grasshopper.

Those which are active, and move about in this stage, present us with some of the most destructive forms of the whole insect range; while at the same time, it is also true, that those which are the most beneficial to us, in checking the depredations of the others, are also found within its limits.

The last form which these creatures assume, is that of the perfect, complete insect, called imago; in this stage the insatiable appetite, which is mostly in the other stages—the governing impulse, is (in the larger number,) replaced by a desire for continuing their species; and here a much shorter time is spent; its life is drawing near its close, and after having performed that duty which nature has enjoined upon it, it resigns its being and returns to dust.

It is almost impossible to over-rate the influence which insects have upon us; in the field, in the garden, in the house, we find them carrying out the purposes of their destiny, and filling up a large space in the great chain of organic life.

It is not necessary for us here to enlarge more particularly upon the methods adopted by insects, in fulfilling their destiny; almost every species has its own peculiar manner of life, and it is only by studying these in their individual relations, that we can hope to arrive at a satisfactory knowledge of their ways; but by having, in some measure, directed the attention to some of the general but well marked characteristics of these interesting beings, we would hope to cause

an interest to be felt, which, if carried out with energy and zeal, might lead to important results in preventing the ravages of the noxious species, or in completing the important history of those which are beneficial. P. R. UHLER.

Turnip Culture and Stock Raising.

OWEGO, July 11, 1859.

Editors of American Farmer:

I have had much pleasure in discovering the beautiful country you have around Baltimore; a finer quality of soil I never wish to cultivate. Being so well adapted to the rotation of crops and the cultivation of roots, it cannot fail to become one of the most productive countries in the Union. What would become of England without the root crop? It is one of the most renovating and best cleansing crops in the rotation, and will produce more beef and mutton per acre than any other raised.

The only difficulty in our northern climate is the hard winters. The expense of housing them in that season is somewhat of a drawback; but in such a climate as this, you have the same advantages as possessed in England. They can remain out the whole winter, probably not wholly exposed; but by ploughing a furrow up to each side of the row, they will be protected. If not come-at-able in mid-winter, they can be fed on the land late in the fall and early in the spring, securing a sufficiency to feed under cover during the severest part of winter. Sheep never do better than when fed in the open air; they will not bear confinement in close sheds, except in very severe frosty weather, (to which, I should suppose, you were not frequently subject.)

Sheep husbandry and root crops are the main stay of England, and I am fully persuaded that America will have to come to it. Agriculture cannot be successfully pursued without a judicious system. A *large farm* without it is a curse to any man, and he who has impoverished such a one will find it no very easy matter to bring it back to a proper state of cultivation; the expense is far greater than is generally anticipated. A farm well stocked, with a proper rotation of crops, will be sure to be kept up, and a small farm well tilled will pay much more than a large one tolerably well done.

Now, Mr. Editor, I think you have one of the finest countries in the Union for the true course of agriculture, and a few good examples would do much for it. If you will allow me, I will give you some description of the different systems pursued in England, which I know to have been successful, and which I am satisfied would increase the produce of your soil, and enhance its value full one hundred per cent. of its present value.

Such a country as you have in the neighborhood of Baltimore ought to supply the Baltimore, Philadelphia, and Washington markets with as good beef and mutton as can be found in the world, and with successful root culture there would be no difficulty in doing it. I should glory in seeing the same flocks and herds on the same space, say fifty square miles, here as in England. What a splendid country it would make of it; and it will not take twenty years to compel you to feed your land, so naturally productive. The present skinning system must bring every man to his senses.

You will hear from me again, Mr. Editor, should you consider this worth publication, in which I will give you the different systems pursued by some of the best farmers in England, most of whom have made money by their practical operations. WM. H. SOTHAM.

Sheep from New Mexico.

The following communication from Lt. Col. D. H. Miles, will commend itself to the farmers of Maryland, and be interesting to the breeders of sheep. The Navajo sheep is represented as being very large and of remarkably fine flavour; the wool is abundant, but not of the finest quality. On the 30th of April Maj. Donaldson had these sheep at Santa Fe, N. M. They were in fine health and condition. He intends to bring them in himself, leaving about the 1st of July, reaching here about the first week of August. They will, we understand, be exhibited at the Maryland Agricultural Fair, to be held in Frederick in October next:

HEADQUARTERS NAVAJO EXPEDITION,
Fort Defiance, N. M., Nov. 24, '59.

MAJOR: Out of the fourteen or fifteen thousand sheep captured of the Navajoes during the war which I have just concluded with them, I reserved two rams having the singularity of three and four horns—the former black, and the latter white, and which I designed to present to our native State—Maryland. The Marylanders belonging to that portion of the army which I have the honour to command during the war, viz: Capt. George McLane, reg't mt. rifles; Ass't Surgeon, James T. Chiselin; Capt. H. H. Schroeder and Second Lieut., John McHildt, 3d inf., request to participate in the gift, and that you will also join. The majority are desirous that you send these rams to St. Louis, and to Baltimore by the first safe opportunity—we, conjointly, sharing expense—consigning them to Col. John Merryman, the President of the State Agricultural Fair, that they may be exhibited in Baltimore in the fall of '59, and then presented to the Agricultural College of the State, for the benefit of the people of Maryland.

I am, Major, &c., D. H. MILES,
Lt. Col. 3d Infantry.

To Major James L. Donaldson, A. Q. M., Santa Fe, N. M.

OHIO STATE FAIR FOR 1859 will be held in September next, near Zanesville, in a beautiful enclosure of 45 acres, known as "Camp Goddard," situated about a mile southward of the city and accessible by good carriage roads from Zanesville and by the Wilmington Railway. The railroads generally throughout Ohio have agreed to convey passengers visiting the fair at half price and transport articles for exhibition to and from the fair free of charge. Parties intending to exhibit should forward their entries, with appropriate entrance fee enclosed, to J. H. Klippart, Cor. Sec. O. S. B. of Agriculture, at Columbus, Ohio, until 10th Sept., after that time, at Zanesville.

"Jots and Tittles" by a "Well-Wisher."

SEVERN SIDE, June 14, 1859.

N. B. Worthington, Esq.

DEAR SIR: Last June, when you became sole proprietor of the *American Farmer*, I took occasion to offer my best wishes for your success. All the year round I have been an attentive reader of the journal, and have observed with pleasure the ability and fidelity displayed in its management. I trust that both its editors and patrons are well satisfied with the year's intercourse; and for myself, shall not refrain from stating, that in each of the twelve numbers I have found something of more value to me than the annual subscription. Among the more recent, is the article on "Sweet Potato Culture," and for which I desire the writer to accept my thanks, since he has put me in the way of raising—judging from the present appearance of the crop—an abundant supply of that excellent vegetable, and which, heretofore, I have never succeeded in counting among the products of my garden. True, I may not hope that mine will attain the gigantic proportions of those they *tell of* in the Carolinas—so long that the cook may sit upon one end while the other is roasting in the fire, and so large, that one would have furnished a meal to Marion and his men in most hungry mood—but I dare say they will be very sizable tubers.

The essay on Landscape Gardening, in the last number, deserves the special attention of farmers. There is, I think, a rapidly growing taste for this, the finest of the fine arts. Much less ridicule than formerly is bestowed upon those who venture to build a house with more than four plain walls, or with eaves spreading an unnecessary inch beyond them. The pigs, too, are now generally banished from the front yard; and we are beginning to learn that a few dollars spent in trees, flowers, &c. give a charm and dignity to the home and occupation of the farmer, and enhance the value of the farm much beyond their cost. It has been well said that, he who lays out grounds and gardens, calling new beauties into existence, not only for his own gratification but for that of his contemporaries and successors, is exercising a benevolent power which makes him a species of creator. Like all the pure and simple pleasures, this is an enjoyment which rewards itself, and retains its attraction at every period of life. The word Paradise is synonymous with garden, and the Elysium of the ancients consisted of sylvan fields. Happy the man who can secure a living apotheosis amid the beatitudes of a terrestrial garden!

As my meadows are not large, and as my stock have occasionally been put upon short rations of hay, I have to-day acted upon your suggestion by sowing a few acres of millet and Hungarian grass. Whether they are adapted to our warm and light lands remains to be seen. After many trials of various kinds of seed, I have found the orchard grass the best suited to my soil. It grows well in the dryest situations, and forms a very tenacious sod. The roads through my vineyards are set with it, and I sow it on all the slopes upon which I desire to retain an unbroken surface. I hope you will give that Mezqueet grass seed (sent to you by a correspondent in the Southwest) a fair trial. Judging of it only by the avidity with which I have seen horses devour it, I should regard it as valuable, and I have always thought that it would thrive in the tide-water region of our State.

The grasses, and the soils required for each together with the proper mode of culture, are subjects of very great interest and importance: and perhaps there is no branch of agriculture now so little understood. If it were possible to compute the value of the seed and labor annually thrown away and utterly lost, from the want of correct information on these points, the amount would seem almost fabulous. The severe and frequent losses from this cause have doubtless prompted the publication of the following recipe for a meadow or lawn. I suspect the author has been "victimized," though he evidently can be merry over his misfortunes:

"Have your soil analyzed by a competent chemist, in order to ascertain the degree of fertilization required. On the poorest sections lay twenty dollar bills a foot thick, on better soil ten dollar bills, and so on from fives down to ones. Great caution is required to graduate the value of the bills to the quality of the land. Then plough with sub-soil plough of the most approved pattern; then harrow it with fine-tooth harrow: then sow with grass seed, nine bushels to the acre; then harrow it in and bush it. Watch it carefully and as soon as the grass is up one inch, roll it."

It is to be regretted that this recipe was not made public in the age of shinplasters—back to which, the memory of nearly every reader must extend. How many acres of waste land might have been clothed with luxuriant grass! Our farmers, however, are not now to be informed that there are many establishments in your city for the manufacture of the above named *fertilizer*. It may cost a fraction more than some of the patent portable manures advertised in your columns, but it has at least the merit of being more thoroughly "*manipulated*"—(upon which operation much stress seems to be laid in these latter days)—and that it will be found as good as the majority of them, I have no doubt whatever.

It is cheering to receive the accounts of the growing crops which the papers continue to publish from all parts of our country. In view of the war that has just commenced in Europe, and the demand for food which its continuance must bring to us, a vast breadth of corn has been planted this spring; and if the season should be propitious, the aggregate production will be unparalleled in the annals of agriculture. But I am at a loss to perceive why the tobacco market should be depressed by the "Italian imbroglio." Does it not seem more reasonable that the consumption of the fragrant weed should rather be increased by it; that the victorious should celebrate their triumphs with an extra cigar, and that the defeated, instead of chewing the cud of disappointment and chagrin, should solace themselves with a quid of Maryland or Virginia growth? Why should the French and German nations (not to mention "all the rest of mankind") cease to use tobacco because those young braves, Napoleon and Francis Joseph, have taken the war-path? There can be no question, I apprehend, but that whatever may be the result of the contest, the Italians will have "*to smoke.*"

But the mention of war and tobacco reminds

me of that *army in green*, soon to invade and ravage our fields—the tobacco-worms. Will not the planters of this county at least, adopt the suggestion of Col. Hughes, and make a united effort for the extermination of the common foe? The remedy named is an effectual one, and has long been most successfully applied by the tobacco-growers of Florida. Last year I obtained from a planter of that State their modus operandi, and should have sent you his letter for publication, had not the appearance of Mr. Shepherd's communication rendered it unnecessary. I quote a few lines, however, as the information cannot be too often repeated, and may aid some in its application, besides showing how easily the enemy may be routed:

"If our planters have not an abundance of this weed (the Jamestown) growing spontaneously—as is usually the case—they take care to plant it. * * * * * Laths or tobacco-sticks are inserted upright through the fields, about thirty yards apart, regularly through the rows. These sticks being split at the top, receive and hold one or more of the blossoms of the Jamestown weed inserted in the evening. Into each of these blossoms are poured a few drops of the liquid Cobalt, sweetened with sugar or honey. The flies visit, and eagerly eating from the flowers, are killed instantly."

Your introductory greeting to each month is in good taste, and I had intended to send back the echo from our woods and hills to that which graces your June number, but I cannot just now summon to my aid the requisite amount of "sounding brass," and am too drowsy, after the fatigues of a hot "field-day," to invoke the Muses. So closing our eyes to that "spirit of beauty," to whose lovely features you invite our admiration, (and who, I can assure you, is always "abroad" at Severn Side,) I will e'en close this letter of jots and tittles, and bid you and the world "good night." Truly your

WELL-WISHER.

VALLEY AGRICULTURAL SOCIETY OF VIRGINIA.—The society held its fourth annual meeting in Winchester, Monday, the 4th April.

The meeting was well attended. The Executive Committee made their annual report, showing the condition of this society, financially and otherwise, to be of a satisfactory character.

The following gentlemen were re-elected officers of the society for the ensuing year:

President—Hugh M. Nelson, of Clarke.

Vice Presidents—Thomas F. Nelson, of Clarke; Braxton Davenport, of Jefferson; C. J. Faulkner, of Berkeley; Robert L. Baker, of Frederick; John Strother, of Morgan; George W. Washington, of Hampshire; Felix B. Welton, of Hardy; S. Lewis, of Rockingham; G. S. Meem, of Shenandoah; Samuel Gibbons, of Page; J. Smith Davidson, of Warren; B. F. Rixey, of Fauquier; Robert L. Wright, of Loudoun; John G. Lane, of Rappahannock.

Recording Secretary—James H. Burgess, of Frederick.

Treasurer—George W. Ward.

Curators—Jas. Bowles, Jonathan Smith, Henry M. Baker, Levi Heitt, Beverly Randolph, James W. Mason, Nathaniel Burwell, James H. Kemp.—*Virginia Republican.*

[For the American Farmer.]

Peculiar Qualities and Properties of Earth.

The infinite wisdom of the Creator is not as strikingly illustrated in the exquisite mechanism displayed in the construction of all natural bodies, as in the distinct and peculiar qualities with which He has endowed each created substance. The reasoning faculties conferred upon man—the peculiar instincts bestowed on each species of animals, and the distinct and peculiar qualities possessed by each species of the vegetable creation, are subjects infinitely beyond the comprehension of the human intellect. Science may enable us to imitate the structure and appearance of natural bodies, but science cannot impart those innate qualities which characterize them as the work of Deity. The earth itself is manifestly the most important of all created bodies, being destined for the support of all life, both vegetable and animal; and it cannot appear unreasonable to believe that it not only exhibits infinite wisdom in its construction, but is also endowed with wonderful and incomprehensible qualities. Its structure has received the laborious investigations of scientific geologists, and the science of chemistry has been devoted to the elucidation of its chemical composition; but the innate qualities with which it is endowed, do not appear to have elicited the attention of scientific agriculturists.

From an observation of facts I have been induced to believe that earth itself possesses qualities quite as mysterious as those conferred upon the animal and vegetable creations, and I am induced to submit them for your consideration, from the hope that the subject may hereafter engage the attention of some more talented investigator. I will state the deductions from the facts in distinct propositions, without enumerating the facts themselves for fear of trespassing too much upon the columns of your journal.

Proposition 1. That earth is indestructible.

2. That it possesses the quality of spontaneous vegetation.

3. That it has a self-renovating power—that is, that when poor, it may become rich solely by the shade of those plants which it spontaneously vegetates.

4. That it possesses the power of discrimination in spontaneously vegetating those plants only which, from circumstances, it may be best able to grow to perfection.

5. That it is capable of experiencing only one chemical change, namely, the process of putrefaction.

6. That it possesses sufficient tenacity to sustain erect the largest trees, and is yet sufficiently porous to permit their roots to permeate it in search of food.

7. That it has the capacity to absorb water and yield it again to plants in case of severe draught.

8. That it possesses the power to reflect heat so as to preserve the subsoil of an equable temperature.

These innate qualities appear to me to demonstrate clearly that earth is a natural body, an original creation, possessing internal evidence of its divine origin. The agency conferred upon the rocks in the harmony of creation can scarcely be deemed of less importance than the qualities pos-

sessed by the earth itself. Without the aid of the rocks the earth would be incapable of performing the duties for which it was manifestly created. By acting as drains for the superfluous water which descends from the clouds, they preserve the surface soil in a condition suitable for cultivation, and for the growth of the cultivated plants, and thus become the sole agents by which the world is supplied with streams and rivers of fresh water, indispensable to the existence of animal life.

What are rocks? As no accurate definition of the substance called rock has been given, and no peculiar quality ascertained by which all rocks can be distinguished, this question cannot be readily answered. Hardness cannot be considered characteristic, for many natural bodies are harder than rocks; and earth itself when fused in lavas or manufactured into brick, will become harder than many rocks. Yet these substances in time and by exposure to the weather will become earth, possessed of all its original qualities. May we not therefore believe that those rocks, so called, which become earth by exposure to the weather, were originally earth, hardened by some process with which we are unacquainted? It was the opinion of Lord Bacon that earth only served as a medium for conveying food to the roots of plants. That this is one of the qualities of earth (but not the only one certainly) can be proved by the fact, that we can rear plants to perfection in an artificial soil. But to accomplish this in a soil destitute of the innate qualities of earth, requires so much care, labour and attention, that man would find it utterly impossible to obey that decree of his Creator—"In the sweat of thy face shalt thou eat bread till thou return unto the ground." Respectfully,

Winchester, Va. R. T. BALDWIN.

We shall be very glad to have the peculiar views of Dr. Baldwin contained in the above, on a very interesting subject, receive the attention of those whose investigations lie in the same direction.—*Eds.*

Black Hawks and Morgans.—A subscriber in Illinois desires to know if there is any difference between a Black Hawk horse and a Morgan horse, and if so in what the difference consists.

Answer—Black Hawk being a grandson of the original Justin Morgan was a Morgan horse, and his descendants are with as much propriety called Morgans, as the descendants of Woodbury or Bulrush.

The members of the Smith family in this country are properly enough called Smiths, but they are also Americans. Now although all the Smiths born in this country are Americans, all Americans are not Smiths. So while all Black Hawks are Morgans, all Morgans are not Black Hawks.

We say of a son of Bishop's Hamiltonian, that he is a "Hamiltonian." He is also a Messenger horse, for Bishop's Hamiltonian was by a Messenger, but all Messenger horses are not Hamiltonians.—*American Stock Journal.*

Tansy is highly recommended as an antidote to fleas. Give a bed of it to your dog.

Mr. Dana's Seedling Pears.

[We have given below, condensed from *Hovey's Magazine*, the descriptions of the new seedling pears raised by Mr. Dana, at Roxbury, Massachusetts. The *Shawmut* we have omitted as it rots at the core.—*Eds.*]

Mr. Dana's experience has shown the fallacy of the oft-repeated remark,—which, by tacit consent or through the ignorance of pomological writers, has generally obtained,—that seeds of the finer varieties of pears would never produce improved fruits, but that the Van Mons theory of gradual improvement from the wild state, by successive generations, was the only reliable mode of producing great results. It was, we think, the remark of Duhamel, an eminent author on pomology,—though we know not how far his own experience confirmed it,—that seeds from improved varieties of fruit always degenerated or returned to the character of the original type. All experience in regard to our American fruits contradicts this; for many of our best varieties have been found in old gardens in the neighborhood of the fine old pears, from whose seeds the trees have sprung up, and grown to maturity to excel their parents.

The Van Mons theory, though undoubtedly leading to partial success, is only done at the loss of years of time and labor, and is a process which the patience of few men, however ardent in their love of pomology, will ever be likely to attempt. It is better to commence where others have left off, than to go over the whole ground again. This is the course adopted in the cultivation and improvement of other fruits and plants, and we see not how the pear should be an exception.

Mr. Dana's seedlings have never yet been seen in anything like the perfection which they will attain in the hands of skilful cultivators.

Dana's Hovey, (No. 16.)—This most remarkable production is undoubtedly the richest pear yet known. To say that it is as good as the Seckel would be praise enough; but it is more than this. It has not the spicy aroma of that old pear, but it has what is more luscious, a peculiar nectar of its own,—unsurpassed and apparently unapproachable,—a refined compound of the aroma of all other pears, neither too musky nor too spicy, but a sort of honeyed juice, not cloying with its sweetness, nor harsh with its acid, yet delicately refreshing and luscious.

The tree is almost as remarkable as its fruit. It is a very vigorous though not rapid grower, making stocky, short-jointed wood like the Seckel, to such an extent that we begin to think it may have been raised from it. In habit it is erect and pyramidal like the Buffum. Its leaves are rather large, broadly ovate, and of a deep glossy green, maintaining their color and holding on to the tree till late in autumn. It is extremely hardy, withstanding the very cold winter of 1857, when so many other pears were fatally injured or destroyed. Its productiveness, so far as it has been tried by Mr. Dana, appears abundant, and its keeping qualities wonderful: out of many specimens examined, for four or five successive years, we have never found them rotting at the core; and with proper care it may be had in eating up to the first of January.

Size, nearly medium, about three inches long and two and three quarters in diameter: *Form*, obovate, regular, largest about the middle, narrowing to each end with a small crown: *Skin*, thin, fair, smooth, deep yellow, nearly or quite covered with a rich crimson russet, dotted with white and grayish specks: *Stem*, medium length, about three quarters of an inch long, slender, and inserted in a very small, scarcely noticeable cavity: *Eye*, medium size, open, and set nearly even with the surface of the crown; segments of the calyx narrow, pointed, reflexed: *Flesh*, yellowish white, fine, melting, and very juicy: *Flavor*, sugary, refreshing and luscious, with a most delicate, peculiar and indescribable aroma: *Core*, medium size: *Seeds*, medium size, obovate, dark. Ripe in November and December.

EXCELSIOR, (No. 12.)—Among the earlier or September pears, Dana's Excelsior holds a most prominent rank. We already have a great many good pears of that season, but, besides the Belle Lucrative, few which come up to the highest standard. This pear, therefore supplies a deficiency. Mr. Cabot, who has briefly noticed this and Mr. Dana's other seedlings in the *Magazine of Horticulture*, describes it in shape and size as "very much resembling the Bartlett, with a tender flesh, juicy, and brisk subacid flavor." It has the uneven surface which distinguishes the Bartlett, is about the same size, and would easily be mistaken for it from its outward appearance; but the taste reveals a character at once unmistakable and peculiar. Combined with a refreshing vinous taste, it has an aroma quite unlike any other pear, and eats with a peculiar relish. It is as distinct in its fruit as the tree is distinct in its wood and growth, which is so strongly marked as to be at once distinguished in a whole collection. The growth is strong and upright, with horizontal branches, and dark, dull brown or chestnut coloured, more like some apples than a pear. The tree is productive and the fruit keeps a long time. The characteristics of the tree show how much seedlings vary from their parentage.

Size, large, about three and a half inches long, and three in diameter: *Form*, pyramidal and slightly irregular, somewhat resembling the Bartlett in its outline, with an uneven surface, contracted near the stem and small at the crown: *Skin*, fair, smooth, yellowish green, thickly covered with large, dark green russety specks: *Stem*, long, about one and a half inches in length, rather stout, and obliquely inserted in a very slight cavity, surrounded with projections and swellings, highest on one side: *Eye*, medium size, closed, and set even with the surface of the crown; segments of the calyx short: *Flesh*, yellowish, little coarse, melting and very juicy: *Flavor*, vinous, sprightly and refreshing, with a delicate but very peculiar aroma: *Core*, medium size: *Seeds*, medium size, short and plump. Ripe in September.

AMERICA, (No. 19.)—This very large and fine pear is an important acquisition, ripening as it does in December, or the early part of winter, when we have as yet but a limited number of choice and reliable sorts. After the Swan's Orange, Urbaniste, Duchesse and a few other kinds are gone, there are but few in eating till the Winter Nelis and other winter varieties are ripe. It comes at just the period when fine pears are wanted, and well supplies the place of the Beurre Diel, which, we regret to say, cracks badly in some seasons, and can only be raised in perfection on good soils and in favorable situations. Mr. Dana's America has none of this fastidiousness in regard to the growth of the fruit, but perfects itself as readily as the Bartlett, and we think is destined to hold as high a rank, as a late pear, as that does as an early one. The tree is a very strong and vigorous grower, so much representing the Diel in the color and form of the wood as to lead us to think it may have been a seedling from it. The habit of the tree, however, is different, being very regular and rather pyramidal. It comes into bearing quite young, trees only three years old being completely covered with flower buds. The fruit hangs upon the tree well and keeps up to January.

Size, very large, nearly four inches long and four in diameter: *Form*, roundish obovate, somewhat angular, with an uneven surface, obtuse at the stem and rather small at the crown: *Skin*, thick, little rough, dull greenish yellow, much clouded with dull russet, and thickly covered with large dark russet specks: *Stem*, medium length, about half an inch long, stout, and obliquely inserted in a small shallow cavity: *Eye*, small, nearly closed, and rather deeply sunk in a small furrowed basin; segments of the calyx long and narrow: *Flesh*, yellowish white, little coarse, melting, buttery and juicy: *Flavor*, very sugary and exceedingly rich, with a refreshing aroma: *Core*, medium size: *Seeds*, medium size, broad, light brown. Ripe in December and keeps well.

ADMIRABLE, (No. 3.)—This pear, whose name so truly expresses its character, Mr. Dana prizes among the very best of his seedlings, and is a most delicious fruit, ripening in October, and surpassed by few or none of its season. It is large and handsome, though quite unlike the others in form and taste. It has a great deal of the character belonging to the Brown Beurré or Beurré Superfine class, and smacks of champagne; while those already described are of the Seckel type. Those who like a brisk, vinous pear would perhaps prefer this to the others.

The tree is a vigorous grower, little irregular in shape, and rather tardy in coming into bearing.

Size, large, about three and a half inches long and three in diameter: *Form*, roundish oval, largest in the middle, tapering to each end, slightly swollen on one side, and little irregular on the surface: *Skin*, fair, smooth, fine yellow at maturity, with a circle of russet at the base of the stem, and more or less traced and thickly dotted with russet, particularly around the crown: *Stem*, medium length, about three quarters of an inch long, rather stout, swollen at the base, and obliquely inserted without any cavity: *Eye*, small, closed, and set nearly even with the crown, surrounded with a few irregular projections: *Flesh*, yellowish white, little coarse, melting, buttery and juicy: *Flavor*, rich, brisk and vinous, with a delicious perfume: *Core*, medium size: *Seeds*, small, light brown. Ripe in October.

Men can better philosophize on the human heart, but women can read it better.

The Honey-Bee—Pollen or "Bee-Bread."

Messrs. A. O. Moore & Co., of 140 Fulton-st., New York, have very recently published the third edition of the admirable treatise on "the Hive and Honey-Bee," by the Rev. L. L. Langstroth. It is a most valuable work and comprises a large amount of information within the small compass of a duodecimo of between 3 and 400 pages; the illustrations being numerous and consist of some 70 figures of bees, hives, &c. &c. We are indebted to a friend for a copy, for examination, and shall give hereafter a number of extracts from this interesting work. We have had for some time and still have a fine model of Mr. Langstroth's famous invention, upon our office table, for examination by those engaged in Bee-keeping. Below, we give nearly entire, the chapter in Mr. Langstroth's work, in which, Pollen, or "Bee-Bread," is treated of.

"Pollen is gathered by the bees from blossoms, and is indispensable to the nourishment of their young—repeated experiments having proved that brood cannot be raised without it. It is very rich in the nitrogenous substances which are not contained in honey, and without which ample nourishment could not be furnished for the development of the growing bee. Dr. Hunter, on dissecting some immature bees, found that their stomachs contained pollen, but not a particle of honey.

We are indebted to Huber for the discovery, that pollen is the principal food of the young bees. I had an excellent opportunity of testing the value of this substance, in the backward Spring of 1852. On the fifth of February, I opened a hive containing an artificial swarm of the previous year, and found many of the cells filled with brood. The combs being examined on the 23d, contained neither eggs, brood nor bee-bread; and the colony was supplied with pollen from another hive; the next day, a large number of eggs were found in the cells. When this supply was exhausted, laying again ceased, and was only resumed when more was furnished. During the time of these experiments, the weather was so unpromising, that the bees were unable to leave the hive.—Gundelach, an able German Apiarian, says that if a colony with a fertile queen be confined to an empty hive, and supplied with honey, comb will be rapidly built, and the cells filled with eggs, which in due time will be hatched; but the worms will all die within twenty-four hours.

Some Apiarians believe that bees with an abundance of both pollen and honey, will secrete wax much faster than when supplied with honey alone; and that its secretion, without pollen, severely taxes their strength.

In September, 1856, I put a very large colony of bees into a new hive, to determine some points on which I was then experimenting. The weather was fine and they gathered pollen, and built comb very rapidly; still, for ten days, the queen-bee deposited no eggs in the cells. During all that time, these bees stored very little pollen in the combs. One of the days being so stormy that they could not go abroad, they were supplied with rye flour, none of which, although very greedily appropriated, could be found in the cells. During all this time, as there was no brood to be fed, the pollen must have been used by the bees either for nourishment, or to assist them in secreting wax: or, as I believe, for both these purposes.

Bees prefer to gather *fresh* bee-bread, even when there are large accumulations of old stores in the cells. With hives giving the control of the combs, the surplus of old colonies may be made to supply the deficiency of young ones; the latter, in Spring, being often destitute of this important article.

If honey and pollen can both be obtained from the same blossom, the industrious insect usually gathers a load of each. To prove this, let a few pollen-gatherers be dissected when honey is plenty; and their honey-sacks will ordinarily be full.

The mode of gathering pollen is very interesting. The body of the bee appears to the naked eye to be covered with fine hairs, to which, when she alights on a flower, the farina adheres. With her legs, she brushes it from her body, and packs it in the hollows, or *baskets*, one of which is on each of her thighs; these baskets are surrounded by stouter hairs, which hold the load in its place. If from any cause the pollen cannot be readily gathered in balls, the bee will often roll herself in it, and return, all dusted over, to her hive.

When the bee brings home a load of pollen, she often shakes her body in a singular manner, to attract the attention of other bees, who nibble from her thighs what they want for immediate use; the rest she stores away for future need, by inserting her body in a cell and brushing it from her legs; it is then carefully packed down, being often covered with honey, and sealed over with wax.—Pollen is very rarely deposited in any except worker-cells.

Aristotle observed, that a bee, in gathering pollen, confines herself to the kind of blossom on which she begins, even if it is not so abundant as some others; thus a ball of this substance taken from her thigh, is found to be of a uniform color throughout; the load of one insect being yellow, of another, red, and of a third, brown; the color varying with that of the plant from which the supply was obtained. They may prefer to gather a load from a single species of plant, because the pollen of different kinds does not pack so well together. Bees, by carrying the pollen or fertilizing substance of plants, on their bodies, from blossom to blossom, contribute essentially to their impregnation.

Though the importance of pollen has long been known, it is only of late that any attempts have been made to furnish a *substitute*. Dzierzon, early in the Spring, observed his bees bringing rye-meal to their hives from a neighboring mill, before they could procure any pollen from natural supplies.—The hint was not lost; and it is now a common practice in Europe, where bee-keeping is extensively carried on, to supply the bees early in the season with this article. Shallow troughs are set in front of the Apiaries, filled about two inches deep with *finely ground, dry, unbolted rye-meal*. Thousands of bees, when the weather is favorable, resort eagerly to them, and rolling themselves in the meal, return heavily laden to their hives. In fine, mild weather, they labor at this work with great industry; preferring the meal to the *old* pollen stored in their combs. They thus breed early,

and rapidly recruit their numbers. The feeding is continued till, the blossoms furnishing a preferable article, they cease to carry off the meal.—The average consumption of each colony is about two pounds.

Mr. F. Sontag, a German Apiarian, says, that in the Spring of 1853, he fed one of his colonies with rye-meal, placed in the hive in an old comb; continuing the supply till they could procure fresh pollen abroad. This colony produced four strong swarms that Spring, and an adjoining stock not supplied with the meal, only one weak swarm.

Another German bee-keeper says, he has used wheat flour with very good results; the bees *forsaking the honey* furnished them, and engaging actively in carrying in the flour, which was placed about twenty paces in front of their hives.

The discovery of this substitute removes a very serious obstacle to the culture of bees. In many districts, there is for a short time such an abundant supply of honey, that almost any number of strong colonies will, in a good season, lay up enough for themselves, and a large surplus for their owners. In many of these districts, however the supply of pollen is often quite insufficient, and in Spring, the swarms of the previous year are so destitute, that unless the season is early, the production of brood is seriously checked, and the colony cannot avail itself properly of the superabundant harvest of honey.

While the honey-bee is regarded by the best informed horticulturists as a friend, a strong prejudice has been excited against it by many fruit-growers in this country; and in some communities, a man who keeps bees, is considered as bad a neighbor, as one who allows his poultry to despoil the gardens of others. Even the warmest friends of the "busy bee," may be heard lamenting its propensity to banquet on their beautiful peaches and pears, and choicest grapes and plums.

In conversation with a gentleman, I once assigned three reasons, why the bees could not inflict any extensive injury upon his grapes. 1st, that as the Creator appears to have intended both the honey-bee and fruit for the comfort of man, it was difficult to conceive that He would have made one the natural enemy of the other. 2d, that as the supplies of honey from the blossoms had entirely failed, the season (1854) being exceedingly dry, if the numerous colonies in his vicinity had been able to help themselves to his sound grapes, they would have entirely devoured the fruit of his vines. 3d, that the jaws of the bee, being adapted chiefly to the manipulation of wax, were too feeble to enable it readily to puncture the skin even of his most delicate grapes.

In reply to these arguments, being invited to go to his vines, and see the depredators in the very act, the result justified my anticipations. Though many bees were seen banqueting on grapes, not one was doing any mischief to the *sound* fruit.—Grapes which were bruised on the vines, or lying on the ground, and the moist stems, from which grapes had recently been plucked, were covered with bees; while other bees were observed to alight upon bunches, which, when found by careful inspection to be sound, they left with evident disappointment.

Wasps and hornets, which secrete no wax, being furnished with strong, saw-like jaws, for cutting the woody fibre with which they build their combs, can easily penetrate the skin of the toughest fruits. While the bees, therefore, appeared to be comparatively innocent, multitudes of these depredators were seen helping themselves to the best of the grapes. Occasionally, a bee would presume to alight upon a bunch where one of these pests was operating for his own benefit, when the latter would turn and "show fight," much after the fashion of a snarling dog, molested by another of his species, while daintily discussing his own private bone.

After the mischief has been *begun* by other insects, or wherever a *crack*, or a spot of *decay* is seen, the honey-bee hastens to help itself, on the principle of "gathering up the fragments, that nothing may be lost." In this way, they undoubtedly do some mischief; but before war is declared against them, let every fruit-grower inquire if, on the whole, they are not far more useful than injurious. As bees carry on their body the pollen or fertilizing substance, they aid most powerfully in the impregnation of plants, while prying into the blossoms in search of honey or bee-bread. In genial seasons, fruit will often set abundantly, even if no bees are kept in its vicinity; but many Springs are so unpropitious, that often during the critical period of blossoming, the sun shines for only a few hours, so that those only can reasonably expect a remunerating crop whose trees are all murmuring with the pleasant hum of bees.

A large fruit-grower told me that his cherries were a very uncertain crop, a cold north-east storm frequently prevailing when they were in blossom. He had noticed, that if the sun shone only for a couple of hours, the bees secured him a crop.

If the horticulturists who regard the bee as an enemy, could exterminate the race, they would act with as little wisdom as those who attempt to banish from their inhospitable premises every insectiverous bird, which helps itself to a small part of the abundance it has aided in producing. By making judicious efforts early in the Spring, to entrap the mother-wasps and hornets, which alone survive the Winter, an effectual blow may be struck at some of the worst pests of the orchard and garden.

Henry Ward Beecher Agriculturally Considered.

"GOOD COWS, GOOD PASTURES, SWEET CREAM."—While other papers are copying copiously Mr. Beecher's reflections on Farming, the "Spirit of the Times" thinks he is out of his depth, and in the following presumes to take him up in several points of agricultural practice:

It is none of our business, so long as Brother Beecher confines himself within his "professional engagements," to notice any of his vagaries, be they good or bad; but when he trenches upon matters that are out of his legitimate sphere, and affect really vital interests, we cannot resist throwing a word of caution; for while we think that mere heresies of belief may exist without any material injury, we think heresies about raising "market sarce" cannot be countenanced without always doing harm. Brother Beecher's latest hobby is farming; he is, we are happy to know,

possessed of a forty-acre lot, more or less, lying in the romantic region of Berkshire, and he has gone into its cultivation with a zeal that almost rivals his efforts in less pastoral, but to him better understood matters. A few weeks' experience, with his sanguine temperament, justifies him in laying down rules, and he assumes his new vocation with a gravity quite amusing, and dressed in descriptive language so charming, that its syren strains will no doubt produce a full crop of "Sparrowgrass farmers."

Fugitively, we have from "Brother Beecher" the following oracular announcement. He says: "To obtain good butter and cheese, it is of the utmost importance to have *good cows, good pastures,* and, above all, SWEET CREAM." Here are apparently three simple propositions that cannot be misunderstood, and the truth of which no one can doubt. In fact, so properly and oracularly did they strike one of our daily papers, that the sentence containing them, with many others of the same sort, was duly copied and commended, as being as full of wisdom as a boiled egg is full of meat. Yet all that is said about good cows, good pastures, and sweet cream, is so vaguely written, that it would lead any inexperienced person astray, conducting him to false conclusions, and tempting him to an outlay of money from which he could receive no adequate return. The pecuniary consideration with "Brother Beecher," we are happy to learn, is not a matter of importance. He has set out on his problematical agricultural experiments with a substantial income of "ten thousand a year," and therefore can stand the expense of amateur farming and his own crude theories, but with persons of only moderate incomes we are afraid the only crop will be bankruptcy.

Now what does "Brother Beecher" mean by the indefinite term of "*good* cows?" Those of the purest breeds are not generally the best milkers, and so frequently is this the case, that the calves of such high bred animals are often obliged to be raised by a "foster mother." A cow for family use that will cost from fifty to seventy-five dollars would be more valuable for dairy purposes than even Cherry 3d, recently sold by Mr. Alexander, of Woodburn, for seven or eight times the price of the best of dairy cows, and it is probable that a Kyloe, for which fifty dollars were paid, would be a better milker than her more aristocratic cousin.

If by good pasture "Brother Beecher" means an abundance of grass, to a certain extent only is he correct, for a pasture may be luxuriant, yet from its produce no butter may be obtained; such, indeed, are the rich marshes in Essex, and the feeding pastures in Durham, Northumberland, and Cumberland (England). These are *good pastures,* the very best for producing mutton and beef, but the very worst for butter and cheese; besides raising mutton and beef upon them, these rich pastures are the proper nursery for all full blooded valuable animals, including horses as well as sheep and cattle.

The pastures in the largest dairy districts in England, Cheshire and Lancashire, are notoriously poor in every sense of the word, and the pastures in Orange County, as far as Chester, and in Westchester County (at least those we have seen), and which produce the best milk, cream, and butter, brought to New York market, have no pretentions to be called good pastures, technically speaking; they are so, we admit, for dairy purposes, and for these only, but they are by no means the best, they will not feed or carry the quantity or quality of stock that others will, and are not worth so much intrinsically by the acre.

The third and last essential in good dairy management "Brother Beecher" lays down as being "sweet cream," in its fresh and sweet state as used at table. (We mean cream as we use it in the country, cream that can be cut with a knife—we cannot take city cream as our standard.) Now this is most decidedly improper; butter—of course, we mean the best—is made from cream purposely *soured* or *turned acid* before it is *churned.* The noted Cheshire cheese is made from new milk fresh from the cow, and even this must be changed—that is to say, converted into curd and whey before it can be made into cheese. And so far from using "sweet cream" in this immense dairy district, in the making of butter, *it is not used at all.* It is a fact, that all the butter made in this extensive county is *neither made from milk or cream that is sweet,* and we know no part of the world where butter is made in large quantities from "sweet cream."

In the large dairy County of Lancashire, where the best of butter and cheese is produced within a circle of fifty miles from Liverpool, it is the custom to churn the milk and cream together, as it is taken from the cows, after standing two or three days purposely to become sour before it is churned; this plan is peculiar to the district. As a general rule, the cream is taken from the milk and kept until it is acid, and then churned: it is never, from choice, used sweet, and it is by no means necessary to be so. Notwithstanding this souring process, every utensil in the dairy, and the dairy itself, must be kept *cool, sweet,* and *clean,* as hands can make them, or both the material and the labor would be wasted.

We have endeavored to show that the term "good cows," as used by "Brother Beecher," is a very vague term, and may represent $50, or $350, and that the term "good pastures," instead of being an essential to dairy practice, is the very reverse, the best being adapted for feeding, and not for milk, butter, or cheese—and, lastly, in order to make *good* butter, *"sweet cream"* is not only not *"essential,"* but is not even required. Such is the loose way of writing of these amuseing amateur farmers who plough their lands in the closet, and make their dairy products over rules laid down by dreamers and speculators in gilt-edged books. If any of our city reared friends have money to throw away let them at once begin the wasteful adventure of practical country life. It is all very pretty on paper, their description of it may amuse a man of quick wit and glowing imagination, may even go to sell a book, but if any practical attempt is made to follow the *ignis fatuus* of amateur farming, bitter disappointment must be the result.

THE PENNSYLVANIA STATE AGRICULTURAL SOCIETY will hold their next annual exhibition on the grounds of the Pennsylvania Railroad Company, at Powelton, (Philadelphia,) on Tuesday, 27th of September, to continue four days.

The American Farmer.

Baltimore, August 1, 1859.

TERMS OF THE AMERICAN FARMER.

Per Annum, $1 in advance—6 copies for $5—13 copies for $10—30 copies for $20.

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N. B. WORTHINGTON,
Publisher of the "American Farmer,"
CARROLL HALL, S. E. Corner Baltimore and Calvert streets, Baltimore.

Editorial Notice.

Under this head, in our August number, one year ago, we announced that we should be aided in our duties thenceforth, "by a gentleman whose general attainments and experience as a writer on rural affairs, would afford us very efficient assistance in the conduct of the Farmer." It is due to that gentleman to announce, as we now do, at his request, that having retired from the position he occupied with us, his connection with the *Farmer* ceases with this issue. We take the occasion to offer him our acknowledgments for the valued aid he has afforded us, and our best and kindest wishes.

☞ Having engaged the assitance of a gentleman of much experience and capacity, who will take charge of the business of this office, the Proprietor of the *Farmer* will find himself henceforth at liberty to give his attention more exclusively to his Editorial duties. He will not therefore share with any one hereafter the responsibilities of the Editorial chair, but will be aided by the regular contributions of several gentlemen, very competent in their several departments to give him valuable assistance.

☞ Will our friends do us the favour to call attention to our premiums, and engage for us the services of efficient agents? There are comparatively few competitors for them, and active young men who will compete, if they do not get the premiums, will get a large commission for their trouble.

☞ We beg the attention of our advertisers to the fact that the *Farmer* is issued a week earlier than heretofore.

A Monthly Supplement.

We issued on the 15th of the past month a supplemental sheet, which was forwarded to the subscribers to the *Farmer* without extra charge. This supplement will be continued hereafter on the 15th of each month, and is designed to meet a demand for a more frequent issue from the office of the *Farmer*, without at all interfering with its present form or character. It may perhaps answer also the purpose of relieving our regular issue, in a measure, from a demand upon its advertising pages, which we find it difficult to meet without enlarging our borders to an unseemly size. In our twelve monthly numbers of the past year we printed more than five hundred pages of advertisements, and our July and August numbers now indicate a still larger amount. While the number and character of our subscription list give very great advantage to advertisers for country custom, the form, the size of the pages, and the permanent character of the magazine are points of very material importance, which are improved by having the leaves of the new volume cut. The monthly supplement, however, will offer inducements for a share of the advertising, from the fact that it will be circulated gratuitously to a large extent, outside of the regular subscription to the *Farmer*.

The supplement will contain matters of current interest to the farmer, reports of the markets, and such editorial and selected matter as may not be deemed desirable in the more permanent pages of the magazine, yet may be of present interest in the way of early information or otherwise. It will be enlarged probably, as there may seem to be occasion. To those not subscribers to the *Farmer* it will be sent for 25 cents a year. We will furnish specimen numbers of the supplement or the *Farmer* to any one wishing them.

Our Business Agency.

We ask attention to the advertisement of our Business Agency. We will say to our friends that we have made ample arrangements to give any business committed to us the promptest and most careful attention, and that we have the best opportunity of knowing the character of the various articles in their line offered for sale.

We call attention to the important fact that we guaranty what we sell, by the inspection of Dr. A. Snowden Piggott, a throughly competent Chemist; and having no interest whatever in the in the manufacture of any article offered in the market, our judgment is entirely unbiassed, except by the known character of what we have to purchase.

☞ We have several times had occasion to observe that an impression exists with some, that our very large advertising sheet is made up at the expense of the reading matter of the *Farmer*. So far is this from being true, that we print frequently more reading than our regular amount of thirty-two pages, because the extra sheets we must use to accommodate advertisers want matter to fill them. Thirty-two pages is the amount of matter we engage to furnish, and there seems to be a deficiency only because the advertising sheet has become so large. The advertising is all extra added matter, and we know it to be of great interest to our readers.

We have another word to say about advertisements, and that is to correct a strange notion of some persons, that we endorse every advertisement that appears in our Magazine. On the contrary, *we endorse nothing*. We *rent* out a page, or two pages to a man, just as you rent your farm, and are no more responsible for what they say, than you for the obligations of your tenant. If we have reason to believe a man to be an imposter, we reject his advertisement for our own and your protection. When we take his advertisement, we allow him to say what he has to say about the article he offers, and it is no part of our duty to express an opinion of it, one way or the other.

☞ We have spoken heretofore a word of warning on the subject of tree pedlars and gentlemen who travel around with the humane and patriotic desire to graft and bud old fruit trees with improved varieties. A gentleman of Northumberland county, Va., informs us that, yielding to the spirit of improvement in this respect, he allowed one of these itinerants to go to work on his orchard at the moderate price of eight cents a graft. He boarded him and his horse and assistants of course—all travellers board free in the country. The enterprising traveller, with his men, went to work cutting fore and aft, inserting a couple of grafts into every small limb, and in a few hours made a bill of some forty dollars. Our friend's belief is that the grafts were worthless if they had succeeded, but the trees are all killed.

Herefords.

John Merryman, Esq., President of the Maryland Agricultural Society, has made, we learn, another addition to his stock of Herefords by a purchase of several head more from Wm. H. Sotham, Esq., of Owego, N. Y. Col. Wm. D. Bowie, of Prince George's, has also purchased of Mr. Sotham, a fine young Bull of the same breed. Col. Bowie has for several years been breeding his stock of Devon cows to a Hereford bull, and has now, we learn from Mr. Sotham, a beautiful herd of this cross, every one of which is marked with the peculiar white face of the Herefords.

While on the subject, we take occasion to call attention to an absurd typographical error, which occured in the note of Mr. Merryman, in the May number, page 348; when speaking of the impression made by the Hereford upon the Devon in this cross, he makes Colonel Bowie say that the Hereford points were *in*distinct, where it should have been that they were distinct. The error was so glaring, that the intelligent reader would not fail to correct it by the context.

It is the intention of Mr. Merryman, to take his herd of Herefords to the United States Society's Exhibition, at Chicago.

The Sheep Discussion.

As we said in the beginning, we do not intend to take part in the discussion of the merits of the several breeds of sheep. Our friend Col. Ware however, in setting forth the merits of the Cotswolds, having taken occasion to record an opinion of this magazine more candid than complimentary, we owe him something by way of recompense. The Colonel, speaking of such discussions as this in which he has taken so conspicuous a part, remarks that but for them, "your journal would not be worth to the farmer the paper on which it is printed." We wished to get our friend to bring his article into smaller compass, and prevailed upon him to rewrite it, not doubting that in doing so he would be struck with the extraordinary candour of this expression; but here it came again in the second edition, "Your journal would not be worth to the farmer the paper it is printed on." It must stand upon the record, therefore, as the deliberate opinion of the Colonel. Possibly he may explain it by acknowledging a very high appreciation of blank paper, while some may attribute it to an extraordinary zeal for discussion. Be it as it may, it is the Colonel's opinion. He is "solitary and alone," however, while the rest of mankind, so far as we can learn, are of a contrary judgment. We like these discussions very much. But must every thing else go for nothing? The essays of our correspondents, the valuable selections scientific and practical, our own editorials both grave and gay! Will nothing but discussions do, and no discussions but *mutton*? Cotswolds yesterday,

Merinos to-day, and to-morrow—"*Revenons à nos moutons!*"

We must not however, allow our friend to think that we would do injustice to his favourite theme. We shall not do so, and, as he says emphatically he requires "facts," we shall furnish such as we may pick up without going out of our way for the purpose, to assist the Colonel as far as we may in finding out the most profitable breed.

The first "fact" we have to offer is that a very intelligent farmer of Gloucester county, Va., informed us within a few days, that having purchased a Cotswold buck some years ago for twenty-five, he sold him, after breeding from him several years, for five dollars. The second "fact" is that this gentleman's flock of good country sheep was seriously injured in vigour of constitution by the cross; that they were ruined as mutton sheep; that their fleece was depreciated in quality *and quantity;* in fine, that he has tried the Cotswold, and, having no interest in any other breed, would not have one as a present to cross on his breed of country sheep.

Another "fact" we will state is that a friend on the Eastern Shore of Maryland, who has bred the Cotswolds for a number of years, and has an interest in upholding them, and is undoubtedly also a judge of good mutton, has taken occasion recently to express to us the highest opinion of the *quality* of the Merino mutton.

We give these facts and opinions for what they may be thought to be worth, without having the slightest feeling of partizanship between the breeds, or any wish that they may weigh a feather more than their value. We ask that our friends will furnish us with any "facts" calculated to throw light upon the merits of the several breeds. We will try to make this journal worth the paper it is printed on, even in the estimation of Col. J. W. Ware.

Japan Wheat.

We have from Mr. Thomas T. Jones, of Patapsco Neck, a specimen of Japan Wheat grown by him the past season. It is a beardless red wheat of small grain and medium quality. The sample brought us was sown the 11th of November and cut dead ripe the 25th of June. Another parcel was sown the 21st of March and in blossom 25th of June. Mr. Jones thinks it will be valuable as an early fall wheat, and probably for a spring wheat, and reports it as very productive.

A communication from Major John Jones too late for this number.

Ruta Baga Turnips.

While we do not at all anticipate that root crops will take precedence of our noble Indian corn in our rotations, nor be made a substitute for it in feeding, we do think them valuable auxiliaries. The *Ruta Baga* is in our opinion the most valuable of them to our Middle State and Southern agriculture, because it combines with its intrinsic value the quality of working in with more facility than any other, into our summer's work. This is an important point practically.

The best chance we have of engrafting the root culture in any measure upon our system of farming, lies in the fact that the Ruta Baga may be sown at any time in the month of July, and as late as the 10th of August. If they *must* be sown by the 1st of July, as sometimes recommended, they will not be sown at all, for the reason that the crop is not in common estimation of sufficient importance to be allowed to interfere with the engrossing cares of corn cultivation, the hay and wheat harvest. But if the ground may be prepared after harvest and after corn working, it is a very different matter.

In England the practice is to sow in June, but they have a summer temperature which does not afford heat enough to ripen Indian corn. Cobbett, an Englishman, who wrote one of the best essays we have met with on the culture of Ruta Baga, farmed on Long Island, and gives a report of careful experiments to test the proper time of planting. He came to the conclusion after long experience that *there* from the 25th of June to the 10th of July was the proper time. He says of seed sown earlier, that they obtained great size and weight, but though they did not actually *go off to seed*, they were very little short of so doing. They rose into long and large necks, and sent out sprouts from the upper part of the bulb, and then the bulb itself, which is the thing sought after, swelled no more. The substance of this bulb became hard and stringy; and the turnips on the whole, were smaller and of greatly inferior quality, compared with those which were sown at the proper time." These effects we suppose are known to all who are familiar with the culture of this root, as the consequence of too early planting. The result is a hard stringy combination of wood and water, instead of the crisp, juicy root, grown mostly during the fall months. Now if the 10th of July was not too late on Long Island, three weeks after that time is not too late for, this latitude; turnips will be growing here three weeks after the ground is hard frozen there.

We are satisfied, moreover, that the experience of farmers here indicates the 20th of July as

quite early enough to begin, and that only for the purpose of insuring a stand of plants. The heavy dews and cool nights of August are favourable to the rapid development of the young plants, while the hotter, drier weather of July would tend to check and injure them.

With regard to other sorts of Turnips, we should in no case sow them before the 10th of August.

Acknowledgments.

We have received from J. H. Bryan, Jr., Esq. of Raleigh, N. C., Secretary of the North Carolina Agricultural Society, a copy of the Transactions of that Society for 1858—from N. B. Cloud, Esq. of Montgomery, Alabama, Secretary of the Alabama State Agricultural Society, the Premium List of the Fifth Annual Fair of that Society, to be held November 15th, 16th, 17th and 18th next in the city of Montgomery—also from J. H. Klippart, Esq., Corresponding Secretary of the Ohio State Board of Agriculture, the List of Premiums and Regulations for the Tenth Annual Fair of that Board, to be held at Zanesville on the 20th, 21st, 22d and 23d days of September next.—"Competition open to other States."

From Messrs. R. Clarke & Co., the publishers, at Cincinnati, Ohio, we have the title page and introduction to a new work, published or about to be issued by them, entitled "The Microscopist's Companion," a popular manual of Practical Microscopy, by John King, M. D., illustrated with 114 cuts. We should be happy to receive a copy of this work, which we believe will prove very useful and of much value to those investigating the secrets of nature through the microscope. Should we receive a copy, its merits shall be mentioned to our readers.

We are indebted to the Hon. Richard J. Bowie of Montgomery county, for sending us a copy of the address of Robert J. Ould, Esq., before the Montgomery Co. Agricultural Society last fall. Having had the pleasure of hearing this very eloquent address, we have the more reason to regret that the printed copy failed to reach us.

We are very sorry to see by his note in the Rockville Journal, that Mr. Bowie positively declines a re-election to the office of president of that society, which he has occupied for several years past, we need not say with how much advantage to the society.

☞ We are indebted to Mr. Stephen O'Leary, Mr. Hewlett's gardener, for a basket of tomatoes. They are raised from seed obtained from the Patent Office, different from the common well-known sorts, and *very* good.

Cranberries.

We have had frequent inquiries recently for cranberry plants, and take occasion to say that we will make arrangements by which all orders for the plants may be filled for $3 per thousand, by the 10th of October, which is time enough for fall planting. In the meantime, we will give in the *Farmer* complete directions for the preparation of the ground and the method of planting. We repeat what we have said before, that cranberries grown by us in Maryland are worth a dollar more per bushel than those brought to this market from abroad. They brought readily last fall $4.50 per bushel, while the yield from a well-set cranberry yard is said to be very commonly 200 bushels per acre. We have no wish to excite extravagant anticipations as to the profits of this or any other crop. That a fortune is to be made by going largely into its cultivation, we do not think, but that it may, with all the drawbacks due to want of experience, be made one of our most profitable fruit crops, we have no doubt, while any one may raise enough for his family use.

☞ A lady correspondent of Queen Ann's Co., Md., inquires whether the Camellia Japonica will stand the winter in Maryland without protection; how they are propagated; and how Dahlia Roots are best preserved.

The Japonica will not stand out farther North, we believe, than Charleston. It is propagated by cuttings. Take a shoot of new wood just below where it joins with that of the previous year, leaving a small portion of the old wood. The cutting should be put in sand, mixed with loam. Dahlia roots, when well ripened before taking them up, are well preserved generally in a dry cellar. We will call the attention of our friend, Mr. Brackenridge, to these matters, however, and get him to give special directions in due time.

We shall be very glad to answer the questions of our fair readers, and as we find them interested in the *Farmer*, give more space to what especially concerns them.

The Boughton Wheat.

We very much hope that this variety of wheat will be well distributed for trial this fall. We shall be glad to see Mr. Boughton well rewarded for the care he has taken with this wheat, and think it probable, from the representations we have had of it, it will prove a valuable acquisition. It is for sale in this market, and we shall be glad to aid in supplying with it those who may be disposed to give it a trial. We understand it is held at $3.25 per bushel. It is a white wheat, hardy, vigorous, and ripens two to three weeks earlier than common sorts.

Maryland Agricultural College.

The Board of Trustees of the Maryland Agricultural College met on Thursday, 21st July, at the office of the *American Farmer*. There were present Messrs. Calvert, (President,) Groome, Carter, Wilkins, Davis, McHenry, Carroll, Mitchell, Roman, Earle, Corcoran, Hambleton, Purnell, Goldsborough, Eldridge, Brune, Brown, Sothoron, Merryman, and Worthington.

On motion, the action of the previous meeting of the Board with reference to professorships was reconsidered with a view to amendment, and the following adopted as a substitute:

1st. *A Professorship of Scientific Agriculture*, including *Chemistry* and its application to the arts, *Geology* and *Mineralogy*,

2d. *A Professorship of Comparative Anatomy, Physiology*, and *Veterinary Surgery*.

3d. *A Professorship of Botany, Entomology*, and *Ornithology*.

4th. *A Professorship of the Exact Sciences*, including Mathematics, pure and mixed, Surveying, Mensuration, Engineering, and Construction, Mechanics and Astronomy.

5th. *A Professorship of Ancient and Modern Languages*, including Latin and Greek, French, German, Spanish, and Italian.

6th. *A Professorship of Mental and Moral Philosophy, History, and English Literature*.

It was deemed expedient at present to fill but three of the chairs indicated, and a large number of applications were examined and discussed. An election was held, which resulted as follows:

For Professor of Scientific Agriculture, &c., Dr. George C. Scheiffer, of Washington, was chosen, with a salary of $1,500.

For the chair of Exact Sciences, &c., Professor H. D. Gough, of Harford county, Md., with a salary of $1,000.

For the chair of Ancient and Modern Languages, Professor Baptista Lorino, of Mississippi, with a salary of $1,000.

The College will be opened on the first Monday of October.

The whole cost for a year's board and tuition will be $250.

The professorships named, it will be observed, embrace a complete course of academical instruction.

The Professor of Agricultural Science will be at the head of the agricultural department, in which will be embraced likewise the duties already assigned to the Register, and the duties of a thoroughly competent practical farmer, who shall conduct the farm in its several departments and instruct the pupils in the various sorts of farm work, and, under the direction of the Register and the Professor of Agricultural Science, conduct such experiments as may be deemed desirable.

We suggest to those who wish to enter their sons at the College to make their application early, as the number taken may perhaps be limited at the beginning, and it is desirable to ascertain early the number to be accommodated. A committee has been appointed to prepare and issue a prospectus containing full information on all points, which may be had on application to Dr. John O. Wharton, the Register, or at the office of the *American Farmer*.

Grass Seeds for a Lawn.

We give, at the request of a friend, the following estimate, made by R. Sinclair, Jr. & Co., seedsmen of this city, for a lawn of one acre, and published in the *Farmer* several years ago. It includes those sorts only that are particularly fine, and such as adorn the most beautiful parks in England and this country, viz: Crested Dogstail, ¼ bushel; Sheep-fescue, ¼ bushel; Hard fescue, ¼ bushel; Red-top, ⅜ bushel; Kentucky blue grass, ½ bushel; Perennial rye grass, ½ bushel; white clover, 4 quarts. This quantity of mixed grasses are furnished by Messrs. Sinclair & Co. for $9. They furnish another mixture for $5—for an acre. To *insure success*, the ground should be rich, well ploughed and harrowed. Sow immediately after the last harrowing or brushing, and then roll. Sow by the middle of September.

We must take occasion however to say, that an excellent lawn may be had without such expense for seed, if you have the patience to wait a year or two for the natural grasses. There is no prettier lawn than is made by the growth of our natural green grass and white clover. These will come in without seed upon ground well prepared and sufficiently manured. A manuring of ashes is especially adapted to the growth of lawn grass. If you want the ground covered quickly however, it is necessary to sow seeds. The ground for a lawn should have been cultivated *deeply* for a year or two if possible, in some hoed crop, well manured. A well cleansed soil is important to a good set of grass seed, and depth of soil important to preserve the freshness of the grass in dry weather. Use plaister freely also.

☞ Our correspondent in Bertie county, N. C., will find his questions answered in several articles in this number.

To Prepare Ground in the Woods for Grass.

A correspondent in Albemarle county, Va., is building in the woods, and wants advice on several points which he will find in an article on grass seeds for a lawn. He wishes to be advised how to prepare his ground in the woods for the seed. In the absence of cultivation in a crop, which we presume cannot be done, the best method is to rake the loose leaves, sticks, and other matter into heaps and burn them, smothering the fire as much as can well be done to prevent too rapid burning and blowing away of the ashes. When this is done, scatter these ashes carefully over the ground in calm weather. There will then still be a scurfy surface of undecomposed leaves and mould, which is not a fit bed for seed. If the surface to be sown is not very large, go over it with hilling hoes, chopping and loosening it a half inch or more in depth in such manner that when dry, it may be thrown together into heaps, to burn as before with a smothered fire. The residue of this burning, composed of charcoal and ashes, will be the best possible dressing for the lawn. Scatter this as evenly as you can, and after another good chopping, sow and rake in the seed. If you have too much ground to admit of its being chopped and burned, after clearing out such stumps and under wood as is necessary, plough it lightly and put it in as fine tilth as you can by harrowing, then sow the seed. This will be at best however, an imperfect preparation.

Crops and Prices.

Without going at large into the subject of crops and prices, we can say, that while there is unquestionably a good crop of wheat as to quantity, and very good as to quality compared with the two years past, there is just as little doubt that the crop of the country at large is greatly exaggerated by the newspaper reports. Yet these newspaper reports, and the necessities of many farmers by throwing a large quantity of wheat into market, will probably depress the prices below even present rates. It will therefore, we think, be safe for those who can wait till October and November to do so. It is entirely impossible, however, that any one can, from information now to be had, form a just estimate of the crop. While we have information from our correspondents of failure and shortness of crops in some sections, and many more of a poor yield in threshing where the crop escaped all disaster, yet they are not sufficient to enable us to form an opinion of the effect upon the average yield. The continuance of the European war, and the quality of European crops, are very important elements in the calculation of prices, which, of course, cannot yet be brought into any speculation upon the subject. We are, therefore, unwilling to take the responsibility of offering to our readers any advice as to the best time to sell.

Peruvian Guano.

We understand that there is a very full supply of Peruvian Guano on hand, but there is no abatement of price. Freights are some ten to twelve dollars a ton, and the whole cost delivered into the agents' warehouses here does not probably exceed $25 per ton. Delivered out of said warehouses to the farmer, it is worth, according to these gentlemen, $62.

We are not willing to offer advice in the premises, but there is, without doubt, an ample supply on hand for fall use, and freights upon it must be paid. If farmers by general consent will postpone making purchases till a late period, the necessity of meeting their bank engagements may force the agency to offer an inducement to buyers by a reduction of price. And if they would take one step further, and *refuse to buy at all at any price* for one year, it would be such a lesson to these people as would last them the remainder of their days.

☞ We are indebted to Mr. Stickney, whose advertisement of wines and other liquors appears in our advertising sheet, for a bottle of very superior old port wine, labelled "for medicinal purposes." It is the easiest medicine to take we ever tried.

☞ We are greatly obliged to Stephen Knowlton, Esq., of Harewood, Harford Co., for two sacks of Peach Blow Potatoes, which will enable us to get into the seed of a genuine article of that valuable potato. Mr. Knowlton has grown them largely, and endorses them both as to quality and productiveness.

☞ Mr. J. Wm. Zink, of Govanstown, engaged in the cultivation of choice fruit for the Baltimore market, has been good enough to leave us a box of Red Antwerp Raspberries of very fine quality.

☞ Messrs. Whitelock & Co. have sent us a box of a very nice article of Corn Starch. These gentlemen are the agents here for a company manufacturing it very largely, as well as a valuable article of food as for the ordinary uses of starch.

Col. J. W. Ware on Cotswolds and Merinos.

[CONCLUDED.]

Now for two rich positions, both news to me: "About four of them (Mr. Bradford's sheep) fed where one Cotswold could be kept." Again, of Mr. Hammond's: "about four of them kept at about the cost of one of Mr. Ware's Cotswolds." How remarkable this for a man writing to inform a public; it is on a piece with his first position, that the merino fleece sold for less than 2.02 and the Cotswold for 100 per cent. less than that, although he admits his "practical" ignorance—which was unnecessary, as his writing shows sufficiently plain that he has more zeal than knowledge—yet he assumes to know (has he it of his own knowledge?) not only what Mr. Bradford and Mr. Hammond, in Vermont, fed their sheep, but also what I fed mine, and professes to know four times as much of my own sheep as I know myself. Would it be believed this same author, of such unbounded knowledge of my sheep and their management, has never been on my farm that I know of—I have not the pleasure of an acquaintance with him that I am aware of, and he could by no means have known the cost of the keep of my sheep. This is very much like a gentleman I overheard telling another that I asked too much for my sheep, I could afford to take less. When asked how he knew, replied, from their cost to me, which he never could have known. I have no objection to giving Mr. Wallach the information, and susceptible of proof. Although my sheep were much knocked about at the fairs last fall, still I have not fed them since one mouthful of grain, meal, offal, roots or any thing but what they could get in the field where I turned my loose horses; there they are now. If Mr. Bradford and Mr. Hammond have fed theirs on one-fourth of that, or four times less, I am glad of it; so much the better for them. Had not Mr. Wallach, in giving the public information, better first inform himself? Yet in both communications Mr. Wallach said Mr. Bradford fed his sheep. As a reply to Mr. Wallach's idea of the keep and requiring food in proportion to live weight, I give the following from the London Farmer's Magazine: "I have known them (the improved Cotswolds) wintered on the arable soils of Hampshire, in the open air, with hay and turnips only, become superfluously fat, while other breeds, fed on the same food, side by side, have barely sustained themselves in store condition."

Now as to muttons: "Mr. Ware may occasionally sell one at an extravagant price, in consequence of the reputation of his flock." Will not Mr. Wallach be candid on any point? Did I ever sell or say I sold one mutton at a time? Except the three to Philadelphia, I have no recollection of ever selling less than thirty in a lot, and to the New York butcher fifty. I have no recollection of ever selling even a part-bred yearling Cotswold mutton under $10 each. The Maryland farmer I mentioned sells at that: I can make a standing bargain at it. Mr. Wallach still seems to think a butcher simpleton enough to purchase a mutton on account of the reputation of a man's flock, instead of the value of the mutton. Here he brings again the difference in cost of keep, although admitting his ignorance of Cotswolds. This is simply "hazardous assertion" and theory, without one particle of "practical knowledge," as he admits, and assumes as facts, what no Cotswold raiser ever could admit *truthfully*, and what no person that had both ever claimed. I have had both, and my conclusions are the reverse. The only way to arrive at the amount of consumption of the breeds, is to put them on grain. A few years since I bought 30 merino wethers, four years old, the pick of 700 and fully equal to any I saw at the fairs; I put them in a field to themselves; I put 30 part-bred *yearling* Cotswolds in the adjoining field. The merinos had the advantage in pasture, age for fattening, and water. I began feeding both lots last of October, twice a day on corn, the same amount to each lot; the Cotswolds always leaving some little of their food, the Merinos sweeping theirs clean and wanting more. I soon saw the Merinos were not fattening right, and changed theirs to what they could consume; they soon verified Mr. Wallach's statement, that "the butchers would not buy the Merino as long as they could get Cotswolds." I sold my Cotswolds, rolling fat, 1st January, for $10 each; I could not sell the Merinos at all until all the Cotswolds were gone from the county, and in March I got $4 for them, determining never to feed another lot of them, as it took too much grain and time; they eat their heads off. I lost by them; the butcher assured me "*he* did, but made well by the Cotswold."

"As to the flavour of the two, there is no comparison,"—that is matter of taste, and of which Mr. Wallach cannot judge, as he knows nothing of the Cotswold. I have the pleasure of an acquaintance with Mr. Cunningham, who, if he prefers the Merino on his table, I expect does so for one of two reasons, probably both: that having an abundance of grass, his Cotswolds get too fat for his taste, or he finds it more economical to eat the Merinos because unsaleable profitably, and save his Cotswolds for the butcher. I do so myself with either common or Merino, as I can get them, for my common family purposes, but if I had a company to dinner, would fear the Merino would not furnish enough, and at any rate would prefer a handsomer saddle. But I expect Mr. C. can hardly be brought to say the Merino is the most profitable of the two for the Virginia farmer. I hope he will pardon my using his name; I did not introduce it.

"The butchers will not buy the Merino, if they can obtain good coarse wool mutton, *because they do not cut up so profitably*." Mr. Wallach in December.

"The Merino *affords less waste in cutting up*—there is less offal in proportion to weight." Mr. Wallach in April.

He seems to assume and abandon positions for their reverse, to suit his purpose, with great facility—shifts about like a flea in a blanket. The reader may reconcile them if he can. Where will he find a butcher that will not say, the larger and fatter the sheep, the less the offal waste of weight? "This fact is said to be revolutionizing the English breeds of sheep." It is strange the English know nothing of it, and he cannot say there is a fine wool sheep in England; they manufacture largely of fine cloth, but find it more profitable to import their fine wool and have mutton sheep. In this same he is condemning the fat of

large sheep, has contended the Merinos will take on fat as fast as the Cotswolds, and yet not be too fat too. "This fact equally obtains in regard to beef." If this be true, then the Journal of the Royal Agricultural Society of England is in gross error, and has not done its duty in stating truly the exhibition at the metropolitan market: "In London the proportion of different breeds—

Short horns..33.00 per cent.	Devons.....5.00 per cent.
Herefords ... 9.25 "	Irish.....9.00 "
Crosses....16.00 per cent., &c.	

The short horns have gone on progressing at a wonderful rate since the commencement of the present century, and are now to be found in almost every county in England as well as in Ireland and Scotland. * * * Whilst the short horns and crosses have increased, the Devons, &c. have declined considerably." This is from the highest English authority, and the reader may choose between it and Mr. Wallach.

"The lambs are *too small* for *profitable* sale for meat, and too valuable for the fleeces," &c. Mr. Wallach in December.	"The wether lambs are not sold to the butcher, for the simple reason that their fleeces pay so large profit for their keep." Mr. Wallach in April.

This needs no comment.

"The average life of a Merino is eight years—that of coarse wools, four." He not only admits, but proves beyond all contest, his utter ignorance of Cotswold sheep, in almost every position he takes. The Cotswold is not fully grown until four.

I never said there were numerous importations of the Cotswolds; I knew the reverse. And here again I am unfairly quoted. I said (and it is easily established beyond doubt or dispute); "Cotswolds not *unfrequently* have twins, sometimes three, and on *some occasions four at a time*." Again, in the very next paragraph, injustice is done me. It is hard to keep him in the right position. I never said Mr. Bradford lost a single Merino sheep; I did not know he had; I had reference to another flock in Culpeper county, whose owner told me of it, and who, I know, never starves or neglects his stock of any kind. But Mr. Wallach gives the information that "Mr. Bradford lost some thirty or forty, and that a proportionate loss occurred with other flocks for several years." Well, these admitted losses, with those I know of, (all in Culpeper county alone,) at the rate that Mr. Wallach puts them, that "three Cotswolds will die to every Merino *'at least,'*" confirms my statement that it would sweep out of the world every pure Cotswold in the United States and trespass probably some on England. I never (put all the losses of my life together) lost as many thorough bred Cotswolds, or anything like it, and from all causes, as Mr. Wallach shows Mr. Bradford lost of thorough bred Merino in one fall or winter. I will say further (and I am pretty well posted) I do not know of the death from all causes, and in all times, of all pure bred Cotswolds in the United States put together, as Mr. Bradford is said to have lost in that one fall or winter, leaving out of count what occurred with "other flocks for several years." If Mr. Bradford had only food for one-half, and they died from starvation —if they were so valuable and profitable, surely he would have purchased food for them. This reflects on his economy, humanity and management.

"I will hazard the assertion that the proportionate loss of Mr. Bradford's flock has been less than Col. Ware's or of any coarse wool flock in the United States, and the profits greater."—"Hazarding assertions" is no way to instruct a public—*facts* are *necessary*, and this might be hazardous indeed. But he has hazarded so many assertions, untenable, such as "Merinos, when wool was duty free, giving 2.02 per fleece, and Cotswolds at least 100 per cent. less,"—"Merinos commanding from the butcher higher prices than the Cotswold, according to weight," after acknowledging "butchers would not buy them, if they could get good coarse wool muttons," and that "four of Mr. Hammond's kept on the cost of one of Mr. Ware's Cotswolds," that I fancy it will not weigh much. He would be hazarding it blindly, as far as mine are concerned, for he is as ignorant as a baby about my losses, profits and costs of keep, whatever he may know about Mr. Bradford's. I will inform him of my loss: one ewe and no more—she faded away from old age, more than double the age he limited her to. I hope Mr. Bradford receives a profit on his sheep to his satisfaction, whether greater than mine is of no consequence. I am satisfied with mine, but would not be if no greater than Mr. Wallach makes out for his.

"Mr. Ware has an intelligent English shepherd, who superintends his flock." Hurrah for this! This seems to be on a piece with every other information he professes to have of my sheep, and about as correct, (is it so about the Merino?) and I suppose from the same source of information. It is *news to me*—if *I* ever had one, *I* never knew it—if I have one, I am not aware of it. So far from it, I have never had a shepherd at all, and do not want one. Mr. Wallach is so *careful* of "hazarding assertions," that I think he must have made a mistake in using my name when he really *meant* Mr. Bradford, for in his December communication he gave a glowing description of Mr. Bradford's German shepherd: "seldom leaves them out of his sight for more than an hour,"—"hurdling them at night in good weather,"—"watching, gun in hand, to punish intruding dogs,"—"sleeps in a house or box on wheels, to roll about with his charge,"—"in rainy weather they are invariably housed, day and night, as during intensely cold weather," with his shepherd's dog. Now, I have not and never had one of these—never house mine at all—have never lost a bred sheep from dogs, and sometimes do not see them for days, sometimes for weeks, and my negro man only looks over them regularly in lambing season. They require no other food than the grass; when all that trouble and expense is required, I shall think of giving them up.

"The Cotswolds die when in fine condition, and apparently in health—the Merino rarely die except from disease, age, or starvation." This is a bright sentence. What that has life dies except from such causes, or by violence, and what prudent, reflecting man would not prefer, when his sheep dies, to die in fine condition. It is a recommendation to the Cotswold, for if rendered into tallow he will bring more money to his owner than any living Merino mutton from the butcher.

This has been tried with even part-bred Cotswolds.

The English date their improvement in agriculture from culture of roots, but it was the mutton sheep they valued the manure of—they had no other.

About "Merinos thriving where Cotswolds would starve." Mr. Wallach acknowledges and so clearly proves his ignorance of the latter, that it needs no answer. Would it not be prudent for him to refrain from that point, as he acknowledges so many Merinos starved and proves no Cotswolds starved?

"In reply to Mr. Ware's comments on Mr. Bradford's care of his sheep," Mr. Wallach is mistaken—it was himself that gave the glowing description of it; I did not even mention Mr. Bradford's name; I was not able to write so handsome account of it. The Merino sheep is not classed as a "mutton sheep" by any. No person denies their being good to eat—that is a matter of taste—but to say that "it is not surpassed by any other breed"—"does not suffer in comparison with the choicest breeds." Pshaw. Again: there is nothing of them—that is the point. I would not keep the mouth four years for the little they give. Mr. Wallach differs from me, that is all. I value the Cotswolds more, because I can use them to profitable account at one year old, at which age they are in the best condition for the table; if older, they tallow too heavily for most appetites, but will then bring almost any price from the butcher. A reliance for profit on wool only, in any breed of sheep, is a poor business, and to be overstocked (which cannot be done with the Cotswold, for the butcher is always ready to buy them,) is a fatal error to a farmer.

I fear, Lord Summerville, Sir Joseph Banks and Mr. Young, from Mr. Wallach's account (I have not read them,) are some such erroneous authorities as Mr. Wallach has proved he relied on.

How can it be, that the Merino "is less handsome and more deficient in form," and yet after being sheared will show better, because the long wool sheep has defects, and yet the "Merino, more deficient in form," will not the defects of *both* then show. The truth is, the mutton sheep is much handsomer with his fleece off. If the three flocks mentioned in Mr. Wallach's only give interest on first cost, would it not be as well to keep the money at interest—it will not starve there.

In a country so situated to market, that muttons could not be got there and larger packs created too great cost for transportation and farming not profitable, but grass sufficient—that will be the place for Merinos, such as Western mountains, but where farming or planting can be advantageously done and tolerable facility to market, with sufficiency of grass to support sheep, the Cotswold is the sheep for profit. Then a farmer ought not to have too many sheep for his grass, ought not to denude his land and expose it—it will assuredly impoverish the land, the sheep and the farmer—and a farmer will find it much easier to make his stock poor than fat, and himself and land poor, than when poor to make them rich. Keep such sheep, and not too many for your grass, as are most likely to be profitable and turn around in the shortest time, that is, come into market advantageously at the earliest age, and such that, when he finds himself likely to be overstocked, can be reduced easily and profitably. Such I have found to be the Cotswold. But when he can give nothing but briars and weeds, have no sheep at all until he can get grass—Providence provided such as medicines, not food for sheep.

JOSIAH WM. WARE.

Berryville, Clarke Co., Va., April 11, 1859.

Grapes—To Keep them Fresh.

From "Journal of the Imperial and Central Horticultural Society of Paris for October, 1858."

TRANSLATED BY ONE OF THE EDITORS.

"For six years past," says M. Rose Charmeux, "I have been studying the subject of keeping grapes fresh. For this purpose I have caused different sorts of contrivances to be made; that which I placed in the Exhibition in the month of May last was entirely perfected. But the preservation of the grape does not depend upon the employment of these apparatus. At present I prefer simple wooden racks, upon which I place, at about six inches apart, glass phials, which cost me about eighty-two cents the hundred. I accomplish thus a notable economy, since each tube of the tin apparatus costs about two cents. In addition, by placing my grape phials along the walls only, all around the fruit room, I can make use of all the space in the middle, and arrange shelves there for other fruits. The rest of my process of preservation consists of the following:

"Cut the bunch of grapes on the trellis at the end of the month of October, or even later, if it be possible. Let it be attached to a piece of the branch, including 3 or 4 joints below the bunch and two above. Put a little grafting wax on the upper end of this branch and introduce the lower end into a phial filled with water. The mouth of the phial may then be stopped up with the wax. In order that the water may be kept unchanged, it is sufficient to add four grains of powdered charcoal to each phial. This addition keeps it pure during a whole year. It is not necessary to fill up the phials, the evaporation not lowering the level of the water more than two or three fractions of an inch in the space of six months. When the bunches of grapes are arranged, as I have mentioned, we have nothing more to do than, from time to time, to cut away the berries that are rotten. It is essential that the temperature of the fruit room should not descend below zero."

[The plan adopted by M. Charmeux for the preservation of the grape may be very successfully practised with other fruits ripening in the autumn; though not with a probability of preserving them fresh quite so long as the grape. We have seen the fruit of the *Algiers Winter Peach* kept fresh in a phial full of water, but unsealed, for a long time, by an amateur fruit cultivator near Baltimore. The peaches, together with the leaves, were not detached from the twig. —*Eds.*]

On the Management of Breeding Cattle.

We give, condensed, the substance of the greater part of an Essay, published in a recent volume of the *Journal of the Royal Agricultural Society of England*, "on the Management of a Herd of Breeding Cattle, &c.," written by Wm. Wright, of Holderness, Yorkshire. The writer says his farm contains 194 acres, 65 of which are grass, all thoroughly underdrained; and that "his breeding stock, all under cover, consists of 25 cows and heifers, 35 calves of various ages, 1 bull, with another for change if required, and 14 feeding beasts for market in the autumn, the practice being to have always a draft of two-year-olds, weighing from 50 to 70 imperial stones, to go off about September in each year." Upon the subject of a choice of breeds Mr. Wright remarks: "It has long been a disputed point as to which is best; but if a world-wide reputation be the test, the 'improved short-horns' are decidedly entitled to carry away the palm. I therefore propose to confine my observations to this breed. It had its origin in the judicious blending of the blood of other breeds; and to do it justice, a full history of the earlier herds would be required. Public opinion has, however, long since put its seal upon the superiority of the short-horns; and no further explanation, therefore, can be needed of my choice of them when, about ten years ago, I commenced laying the foundation of a small herd, less with reference to dairy purposes than to obtain early maturity, and in order that the best meat might be produced at the least cost."

Calves.—"It is generally admitted that 'short-horns' have less disposition to milk than to feed, which my experience has confirmed. When, therefore, there is a deficiency of milk, the young calf is taught to take its food from a crib, contrived for the purpose apart from its dam, but having at the same time free access to her. To provide for uniformity in the rearing of calves, two are allotted to one cow with a good udder, generally without the help of artificial food, but always carefully arranging for the supply to be made good if there is any deficiency."

"The smallness of the calf of a high-bred short-horn at birth is remarkable. In several instances within my own knowledge they have not been more than half the size of those of coarser breeds; but their rapid growth soon supplies this deficiency at birth. As my herd is not kept up for public exhibition, the calves are not forced or fed beyond what may be considered the limits of profit; at the same time they are not kept low; indeed, it would be short-sighted to do this; and as they are intended for early maturity, great care is bestowed upon them from their birth. I have had extraordinary instances of early maturity: last summer, a bullock a year old, that had been suckled for three months and had thereby 'kept its calf-flesh,' showed all the developments of muscle, bone and flesh of a two-year old. The weight of this bullock, at a year old, was estimated at 50 stones of 14 lbs. In summer the young calves are allowed large and spacious pens for exercise; those fed from the kit are kept in a healthy state, and there is less risk of their swallowing hair balls made from licking each other, as is commonly the case when they are kept in small and confined spaces two or three together."

Heifers.—Heifers are usually put to the bull at two years old; sometimes, but very rarely, before; and this arrangement is found most conducive to the fruitfulness of the animals. The bulls used are fed on meal, either of barley or beans, or a mixture of each, along with hay and turnips and a small quantity of oil-cake, not exceeding two pounds per day, as it is found that much oil-cake is unfavourable to their usefulness. A mixture of food is proved by experience to suit both sexes the best, and is found to produce both health and fruitfulness. I have often been surprised at the high condition of some short-horns which have come under my own observation, and which have nevertheless bred with regularity healthy calves; but I am of opinion that a medium condition is the most successful. Exercise in the pens is also most beneficial to the cow during pregnancy, and should be allowed whenever possible. It is a most injurious practice to tie up breeding animals; it prevents the proper circulation of the blood, and causes disease or malformation. When the time approaches for calving, the cow is removed from the pen and put into a loose box; the instinct of the animal is to seek retirement, and her feelings are consulted in this respect; and although a watchful eye is kept over her whilst in labour, it is found imprudent to disturb her except to render that assistance at parturition which may be necessary to ensure a speedy and safe deliverance.

The sympathy of a breeding herd is one of the most interesting subjects for discussion. I have known instances of a whole herd becoming "infected" with casting their calves, and serious loss has followed for several years, scarcely any of the cows going to the end of their time without this taking place. I have always found the best remedy to be to remove any cow that shows the slightest symptoms of this affection and hide it from the rest, for, if they are allowed inspection or opportunity for sympathy to act, it is certain to spread. This infirmity is not considered to be influenced solely by the season; it occurs usually, in the first instance, from accidental causes, and it is only when allowed to spread that it becomes serious in its results. The propensity has its origin, sometimes, from the too free use of turnips in severe weather, combined with sudden changes of temperature. I am not prepared, however, to assert this to be an ordinary cause of abortion; only some half dozen cases, and those at long intervals, having arisen during the whole of my experience.

Although, as already remarked, high condition does not prevent cattle from breeding, it is nevertheless obvious that to feed a bull until his activity is lost is unwise, a medium weight being the best and most successful. I have known a bull fed on tares or other succulent food suffer loss of his usefulness, and great caution is required to avoid a too free use of such food.

Winter Feeding.—The roots consumed, in winter, are principally Skirving's Swede, with a small quantity of mangold wurzel, and the hay and clover produced being limited, is given in small quantities to the calves, and to such cows as are either out of condition or suckling two calves. With the chaff cutter a fresh supply of chop is obtained daily, and to each of the herd, according to age, is given from 2 to 4 lbs. of

ground beans, barley or oats, or an equivalent in cake or a mixture of both, and a plentiful supply of straw is put into the racks; and having observed from experience that the animals prefer to pull for themselves, the chaff or cut straw is confined to one feed a day, at the time when the meal is given out, the two being mixed together. Cut roots are also supplied, the quantity being regulated by the stock on hand. The above food is given when few roots are allowed, and a reduction is made in proportion as the roots are increased. Turnips are cut by hand as wanted.

SUMMER FEEDING.—During the summer, and whilst the cattle are out grazing, they are much less affected with constipation or indigestion than when in-doors and living on a dry diet, and when straw must form one of the principal items of food; but care is especially necessary when the animals are turned out to grass, that they do not eat too much of the fresh grass after living so long on dry food. Summer soiling has been found unprofitable: it causes much labour and expense of cartage and attendance, and can only prove valuable under peculiar circumstances, such as where much clover is grown or where there is little pasture land. A visit made to the water-meadows of the Duke of Portland, near Mansfield, in 1854, verifies my statement; the bulk of hay there grown was certainly large, but the quality greatly inferior, and though it has a value, yet it is not equal to ordinary meadow hay, nor is valuable for fattening purposes.

Young stock are put on clover, consisting of the usual mixture of grass seeds intended to be grazed; and in order to prevent *hoven*, they are at first allowed to graze only for an hour, or at most for two hours. I keep my bulls in loose boxes during the summer, not from objection to their grazing, but to prevent accidents.

BONE DUST.—For many years the dairy farmers of Cheshire have been greatly benefitted by the use of bone-dust, and I have found that, after such a dressing has been given to the grass-land, the cattle have been remarkably vigorous and healthy. Wherever impoverished, ill-looking animals are found, there is probably a want of this invaluable ingredient in the herbage. A dressing of ground bones, bone-ash, or super-phosphate, is a necessary and important part of good and successful management. The quality of the hay or clover grown on land so dressed is much more valuable to the cattle than that grown with ordinary manure. A field of grass-land which had been exhausted, and which I found almost useless, after a dressing of 7 cwt. of ground bones per acre, carried one-half more stock combined with great improvement in the state of the stock themselves. The cost price of 7 cwt. of half inch ground bones is 2*l.* 9*s.*, which, lasting five years at the least, is on an average about 10*s.* per acre. Most graziers will admit that an outlay of 1*l.* is not likely to leave a loss for a summer's run for a bullock. My management, therefore, includes bone manure as indispensable when success and profit are looked for in keeping a herd of breeding cattle."

A number of queries from correspondents will be answered in our next Monthly Supplement.

Purplish Black-Leaved Japan Maple.

We take from a number of the "*Flore des Serres*," published in February last, the following account of a new Maple recently introduced from Japan. To judge from the foliage as represented in the coloured plate in the book from which we quote, it must be a most beautiful and valuable addition to the list of ornamental shrubs. It bears the very long botanical name of *Acer polymorfum palmatum atropurpureum*. Mr. Van Houtte, the renowned florist and editor of *Flore des Serres*, says:

"Nothing is as beautiful in the Japanese gardens," Dr. Van Siebold writes to us, "as this shrub, whose wood and foliage of deep purple, forming a bush, take the place of flowers, resemble a monstrous bouquet of black flowers reflecting a fire. It attains the height of from 10 to 15 feet in its native country, and is met with in the gardens of the rich in the centre of great clumps of Rhododendrons, of Azaleas and of other plants, in the midst of which it is distinguished at once, for it draws and astonishes the eye of the visitor by its unusual appearance, and the magical impression that it leaves upon the mind."

"It does not like light land. We cultivate it in pure leaf mould, with an eastern exposure. The Maples in general prefer good natural soils, not too wet; there our *Acer* will do marvellously."

"It is one of the most beautiful of Dr. Van Siebold's introductions, for this Maple, being perfectly hardy, is destined to add to the picturesque in our gardens."

"It is multiplied by cuttings, by grafts and by layers."

SALES OF PROPERTY IN WESTMORELAND CO., VA.—We learn from the *Alexandria Gazette* that Dr. Wm. Wirt has sold his farm, "Bleak Hall," advertised in *The American Farmer*, containing 1000 acres and forty servants, to a gentleman in New York for $50,000. Also that Dr. Wm. N. Jett has sold his farm "Black Ground," advertised in *The American Farmer*, containing 406 acres of beautiful level and productive land, to Hon. Willoughby Newton, of the same county; at what price we do not learn.

Fish Rearing.

The rearing of fish ought to be, and sometime hence will be as familiar as raising chickens and turkeys. Every man who has a stream of water, however small, may have a fish pond which may be readily stocked with fish, and, with due care and proper attention, may have a pan of fish for breakfast much more readily than many who live on the banks of the river. There is no great art or mystery involved in rearing fish, and as soon as it is understood to be entirely practicable

and as simple as any other branch of domestic economy, it will be taken hold of as a matter of profit and pleasure. We give in part, to be continued in our next, an article which appeared originally in the *New York Observer*, which will give those who desire it some insight into an interesting branch of business.

PISCICULTURE.

This word, which has not yet found place in the English dictionary, is the name of a new and very important art, destined, we believe, ere long, to hold a conspicuous place in human interests and pursuits. The extent to which Nature may be aided by artificial methods, in the breeding of fishes, is a truly wonderful discovery. That eventually, and at no distant day, it will become the means of adding largely not only to the quantity but the variety, also, of those supplies for man's sustenance and luxury, admits scarce of a doubt.

Especially should the subject commend itself to the people of this country. Hitherto the general course of things among us has been destructive toward the inhabitants of our waters. These waters once teemed with life, and from age to age, supplied the aborigines with a large proportion of their food. The English settlers, and their descendants for several generations, fully appreciated this important interest, and passed numerous laws for the protection of the fish. The mill owners with their dams and their saw-dust, are the principal obstacles. Hence the law which required them to leave open a passage way for the migrating tribes; laws which answered but a partial purpose: for the poor fish finding so many hindrances, and compelled to swallow so much that was disagreeable, gradually gave up the attempt and went off to streams yet unobstructed and untainted. With the single exception of the oyster, we have done nothing toward increasing the annual supply of sea-food, but quite the reverse. Had the same course been followed with regard to the delicious mollusc just named,—had we not learned to transplant, protect, nurse and multiply them,—the supply of that precious bivalve would be restricted to the few at extravagant prices. How great a loss it would have been in dollars and cents, how formidable a reduction of the national wealth, let the statistician say. So well is this business now understood and managed, that the vast and rapidly increasing demand is constantly met with an adequate supply.

It is an interesting fact that the efforts of our ancestors to keep good their supplies of fish were not confined to making laws about mill-dams. They sometimes went into this very business of Pisciculture, though not in the modern way. In the cramped writing and half legible records of a small New England township, we have ourselves read the history of its efforts to encourage the annual visits of the ale-wives; this bony and comparatively poor fish being the only one that ascended their little stream. It there appeared that on more than one occasion, committees were chosen for the purpose of conveying these fish to a small pond which was connected with the river by a brook; the purpose being that they should there spawn and multiply. How the experiment was conducted, and with what results, was not stated. Unfortunately for them, the artificial fecundation of fishes' eggs was not then known.

The first suggestion of such an operation appears to have been made in Germany, a hundred years ago. Jacobi, the author, had carefully watched the process as it occurs in nature. He had seen the female at spawning time deposit her eggs by rubbing with her belly against the little stones that lie beneath the shallow stream, having previously, under the same instinctive impulse, used her fins and tail to bring the stones into a position suited to her purpose. He had also seen the male, shortly after, go through the same rubbing process along the egg-covered pebbles, over which he diffused his fecundary milt, like a momentary milky shower.

Thus instructed by nature, Jacobi devised and suggested methods for renewing and increasing the stock of fish in rivers and lakes, by artificial fecundation, comprising nearly every important feature of the system now in use.

The memoir of Jacobi was published in 1758, and re-appeared in a French translation in 1773. Some attempts to put these ideas into practice were made in Hanover, about 1780, and still later in England and in Scotland, but with no marked success.

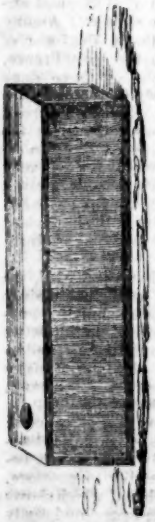
To two obscure individuals. Remy and Gehin, one a fisherman, and the other an inn-keeper in the mountainous region of Vosges—we are indebted for the re-discovery of this important art: Like Jacobi, they had carefully observed the habits of fishes in the spawning time; and, being practical men, they carried into effect the hints which nature gave them. It is now but little more than ten years, since these men received a medal of encouragement from the Vosges "Societe d'Emulation," for a communication on this subject. The announcement of these observations and experiments soon arrested public attention, and it was not long before men of ability and science took the matter up in earnest. Among these may be mentioned M. Coste, Professor of Comparitive Embryology, in the College of France, whose apparatus and experiments have done much for the new art,—and M. Chabot who together with Messrs. Berthol and Detzen, has been successfully laboring in the same cause, at the frontier town of Huningue, where there is an eeablishment founded by government for this very object. In such hands, the whole subject could not but receive a thorough investigation—and, thanks to their intelligent labors, the important art of Pisciculture now rests on a solid and durable basis.

Of this art, as now perfected and practised, we propose to give a brief sketch, condensed mainly from a recent French publication. For this purpose we have been at the expense of the following cuts, that the subject may be more readily understood. We shall be gratified to know that many of our subscribers decide to make experiments in this new department of "stock breeding."

Fishes whether in the freedom of nature, or in artificial receptacles, show plainly enough the approach of spawning. The belly of the female becomes distended and yields readily to pressure. There is a fluctation under the hand, which shows that the eggs are free from the ovary and easily displaced. This being the case, take up in your left hand a female fish, and hold it suspended by

the head and thorax over a flat-bottomed vessel containing clear water. Then with the right

hand passed from above downwards, squeeze the loosened eggs through the anal opening. A male fish is then taken, and the milt is expressed in the same way; though often it flows by the mere act of suspending. This substance, white and cream-like, soon gives to the water the appearance of whey. To insure effectual fecundation, the mixture in this state should be gently stirred with the hand, or with a soft brush. It requires but two or three minutes to accomplish the fecundation.

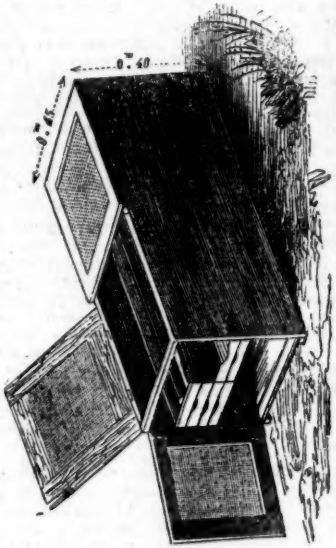


The subsequent processes may be carried on upon the spot—or these impregnated eggs may, like those of the silk worm, be packed and transported to other places, there to be hatched

In the first case, the water with the eggs in it is poured immediately into the hatching apparatus. This may be very simple. Mr. Coste tells us that he has often used a long and narrow wooden box lined with zinc or lead, with a fish box of earthenware. In the laboratory of the Colleges of France, the troughs used are of potter's enameled ware. The eggs are spread upon a movable frame or grate, composed of glass rods, about one-tenth of an inch apart. It seems to be a condition of Nature that this operation of hers, like the great water-lily of the tropics, can go on well only in running water. The water which supplies the hatching-trough must have a constant flow.

Double sieves of wire gauze set in floating frames which keep them immersed, but near the surface, have been used for hatching fish in ponds and rivers. But the mud is apt to gather in them incrusting the eggs and making it necessary to remove them for the purpose of cleaning. Such changes retard the process of incubation. Even after they are hatched, the young fish are apt to chafe the umbilical vesicle, by coming in contact with the wire; an injury which generally proves fatal.

In reference to the above, M. Coste recommends the use of a wooden box, with hinged ends and cover, in all of which are openings for the water, protected by wire gauze, and containing also a fourfold frame of glass rods for the accommodation of the spawn, as follows:



[*To be continued.*]

From the London Gardener's Chronicle.

Charcoal for Gardens.

Many inquiries concerning the best mode of making Charcoal have lately reached us. People are at last desirous of converting their vegetable refuse, their sticks, weeds, leaves, sawdust, and other dry rubbish, into a material that shall have some horticultural value. They have learned that leaves may be easily made to assume the form of something better than half mould, and by a quicker process. Burning has been discovered to be one of the most wasteful of all time-honored practices; and it is at last felt that it is better to preserve the solid constituents of vegetation than to convert them into air and drive them into space. An excellent symptom this, of real unmistakable progress. Intelligence is moving forward.

There can be no doubt that charcoal, whether derived from plants, or the bones, or hides of ani-

mals, is one of the most useful of all known agents to gardeners. It keeps the soil open, absorbs heat takes up the best of the solid and gaseous matters which are found in soil, and gives them up to roots when called upon to do so. Besides which it holds in its own substance no unimportant quantity of those alkaline and others ingredients on which every plant must be able to feed.

Those that have no experience of its effect may easily see how it acts by planting a strawberry in a pot filled with earth and charcoal fragments.

The new roots will cling to the charcoal with all the symptoms of a powerful natural necessity, and growth will be strong and healthy in proportion.

The only question that really requires an answer in the interest of cultivators is how charcoal can be most easily prepared from such worthless materials as were just mentioned. Before replying to this it is as well to consider in what respects charcoal is different from the substances from which it is prepared. Plants consist wholly of carbon, water, earthy, alkaline, and other incombustible matters, and various secretions differing in different species; as for instance resins in Coniferous plants, gum in stone fruit—and so on. The object to be gained in making charcoal is to obtain the carbon, without the water or peculiar secretions of plants. This is affected by heat. If a piece of wood is submitted to a temperature sufficiently high, all the water and other constituents not incombustible and not carbon are separated from the wood, and the charcoal remains behind. That is the whole principle; the difficulty consists in separating the water, &c., from the carbon without setting the latter on fire; for if it once gets into a blaze it is itself converted into air and lost. What is wanted then is to heat vegetable substances up to a high temperature without allowing them to burst into flame. That is done by not allowing air to get to them while heated, and herein is the practical difficulty of charcoal making.

Having premised thus much, we will endeavor to describe two or three simple methods which, if not very scientific, are good enough for such a rough operation as making charcoal for gardeners. The most perfect way is the following:—Cut pieces of wood into lengths of two to three feet, and so that they can be packed pretty closely together and form a heap. This heap may be either placed on the level ground or in a pit; but in the latter case three or four opeuings should be cut in the sides from the bottom of the pit outwards in order to admit a little draught for the ignition of the wood in the first instance. In the centre of the space several long pieces of wood must be fixed so as to leave an opening for introducing kindling; or an opening may be formed by pieces 12 or 15 inches in length, two of which are laid horizontally 6 inches apart; two others are then laid at the same distance from each other across the two first, and so on; thus forming a rough flue 6 inches square from the bottom to the top of the heap. Round these billets, faggots, or bundles of wood are closely packed in a nearly upright position. When completed, the heap should be of a round, conical form. The wood may, however, be arranged in the form of a ridge, several openings being left for firing.—When the pile is completed it must be covered with turf, which may be further closed by earth or sand as is found necessary during the process. Where turf cannot be easily procured, old mats or any other rubbish that will prevent the earth from mixing with the wood will afford a tolerably good substitute. When all is covered except the opening at top and some holes for air near the bottom, fire is introduced down the central flue. As soon as the heaps are fairly in a blaze, the top must be well closed and the smoke, but not flame, encouraged to issue as equally as possible from every other portion of the surface by making holes with a pointed stick where smoke does not appear. Some portion of the wood will necessarily be consumed before sufficient heat can be obtained, but that must be disregarded. As soon as the wood becomes heated to 212° the water is given off in the form of steam, and the whole mass takes fire rapidly enough. Great care is then necessary to prevent flame bursting out; as the heat increases the openings in the coverings must be reduced, and all must be finally closed when the charring is found to be complete.

Excellent material for mixing with potting earth for striking cuttings or growing seeds, &c., may be readily prepared from sawdust. A fire of dry sticks, &c., being lighted on the ground upon a circular space, when it is well alight begin to heap on sawdust with a shovel, allowing plenty of air at first for a few hours till the fire has got well hold then cover the whole with sawdust and pat it down with the shovel, leaving three or four sticks projecting to the outside, which can be raised now and then to admit a little air. When such a heap is once well alighted it may be kept so for months, or indeed any length of time, taking care always to have a load or two of sawdust at hand which is to be thrown on when fire break out at any spot. The heap should be sheltered from strong winds, and never allowed to burn out into the open air. A part of the charcoal thus made may be taken away every month or so from one side of the heap, leaving the rest to keep the fire burning.—Any one within reach of a saw mill can get sawdust for the trouble of carting it. Nearly all the charcoal is prepared in France by a process which is known by the name of carbonization in heaps (*meules*).—The wood is arranged in conical heaps of variable size, which are covered over with a thick layer of earth and of coal ash. The heap is kindled from the centre, where a cavity is kept open for that purpose, and which descends to the base. In this cavity burning charcoal is placed and some small pieces of wood, and the air is admitted by holes formed at the base and over the whole circumference of the heap. After some hours, during which the central cavity or chimney is allowed to remain open, in order to determine a more active combustion, the upper opening is shut, and the carbonization is directed from above downwards, by piercing holes in the covering nearer and nearer to the base of the heap as the operation advances. We apprehend that any intelligent workman, after such instruction would soon form charcoal heaps—in which bones are an excellent ingredient—out of the refuse within his reach. For wood may be substituted anything green or dry that can be had; even freshly mown grass may be employed to cover over the heaps so as to exclude air; for it will

become dry in time, catch fire, and then when covered with grass or with earth will form good charcoal. If he lives in a clay country the heaps may be covered with dry clay only, which, if the heaps are large enough, will become red, when it may be itself covered over by more dry clay, and so on, as long as the core is hot enough. The successive falling in of the clay among the charcoal is by no means objectionable—quite the reverse.

LAND SALES.

MARYLAND.

Alleghany Co.—Geo. A. Pearre, Esq., Trustee, sold a tract of land called Fairview, 247½ a., situated between Lonaconing and Frostburg, to Jno. Lewellyn, Esq., for $2005. *Anne Arundel Co.*—James Iglehart, Jr., has sold his farm on West River, about 450 a., to Samuel Hamilton, for $100 per a. *Baltimore Co.*—At public sale a tract of land, eight miles west from the city, and near the Powhatan factory. It is known as "Wells' Manor," 15½ a., improved by a frame farm house, and purchased by J. H. Hausenlard, for $75 per a. Mrs Warring, at the nine mile stone, on the Frederick road, 1st District, has sold her farm of 180 a., at $120 per a., to Hon. Anthony Kennedy, of Baltimore city, (U. States Senator,) barn, frame, large and new, stone house, 24 by 40 feet. Mr. Kennedy pays for the growing crops at valuation. Land joins Mrs. Mary Palmer, Charles Timanus, Gray's Cotton Manufacturing Co., and Thistle Cotton Manufacturing Co. This sale is more than 100 per cent. advance on the price when last sold. Mr. Levin A. Culbret, of this city, has sold his country seat, on the line of the Baltimore and Ohio Railroad, near the Relay House, known as Rose Cottage, to John W. Isaac, for $6,000. It contains 6 a. of land. At public sale a farm on the Franklin turnpike road, ten miles from this city, 213 a. It is improved by a dwelling house, with all the necessary out buildings, and was purchased by George R. Stein for $25.25 per a., aggregate of $5,378 25. At public sale, about 150 a., whereon Henry Mankin, resided, about one mile from the City of Baltimore. Lot No. 1, 10 a. 3 r. 34 p., improved by stone cottage and outbuilding, for $4,400, by J. Cox. No. 2, 12 a., on the W. side of Jones' Falls, for $265 per a., by I. Mankin. Lot No. 3, 5 a. 1 r. 29 p., adjoining White Hall Mill land, for $150 per a., by R. R. Kirkland. No. 4, 10 a, 3 r. 19 p., for $120 per a. No. 5, 7a. 2 r. 37 p., by do., for $100 per a. No. 6, 10 a. 1 r. 7 p., for $155 per a., by I. Mankin. No. 7, 25 a. 3 r. 29 p., for $100 per a., by A. C. Shaefer. No. 8, 13 a., for $126 per a. No. 10, by do., 3 r. 25 p., for $85 per a. No. 9, 12 a. 8 r. 27 p., by I. Mankin, for $205 per a. No. 11, 20 a. 2 r., by do., for $200 per a.; also, 2 a. 3 r., by W. Kirkland, for $155 per a. *Cecil County.*—J. A. J. Creswell, Esq., Trustee, 673 a., belonging to James Whitaker, Jr., lying on the railroad between Elkton and North East, for $11,000—B. C. Pearce, purchaser. W. J. Jones, Trustee, sold 17 a. in the 8th District, which belonged to the late Wm. Ritchie, for $20 per a.; John Moore, purchaser. James T. McCullough, Esq., Trustee, sold 98 a., lately owned by J. B. Dubree, near Lombardville, for $2,700; John Justison, purchaser. The Farm of Ellis P. Kirk, near Brick Meeting House, 100 a., $2,650—Dr. H. H. Mitchell, purchaser. *Howard Co.*—Col. S. H. Gover sold a farm of 188 a. in Howard county, twenty-two miles from the city, on the Frederick turnpike. Purchased by James Bryan, Esq., for $14 per a. 145½ a., one mile from Savage Factory, and adjoining the farms of Drs. Waters and White, were sold by Thomas Donaldson, Trustee, to parties in this city, at $9 per a. The quality of the land, as indicated by the price, is poor. Thomas B. D. Pue has sold his farm of 420 a. in Howard county, three miles above or west of Ellicott's Mills, at the thirteen mile stone, on the Frederick road, at $80 per a., to James S. McCubbin, lately of Annapolis. The land lies well, is extra good quality, none wasted, all available. House and barn, frame, ordinary size. The land adjoins Ex-Governor T. W. Ligon, Col. Thomas Dorsey, and Hon. Edward Hammond. Maj. H. H. Owing, of this county, has purchased from Mr. Jno. K. D. Thomas, his beautifully improved farm near the toll-gate on Columbia turnpike, 3 miles from Ellicott's Mills, containing 276 a., for $28,000. It adjoins the lands of Messrs. S. Wethered, Lishear and Dr. G. L. Stockett, and has on it one of the most modern and complete mansions on Elk Ridge, with fine out-buildings. *Dorchester Co.*—The farm of J. P. Mowbray, five miles from Cambridge, Md., 232 a., to Job W. Beckwith, for $1,035. *Frederick Co.*—Public sale, the farm of Wm. H. Grove, Esq., 147 a. near Catoctin Switch, B. & O. Railroad, for $35 per a., to Grafton Fout, Esq. The farm of the late John Hoff, about a mile south-east of Winchester, sold by Executors for fifty dollars an acre—Mr. Robert Barr, purchaser. The tract contains about 200 a. *Kent Co.*—Mr. Uston has purchased the "Dorsey Farm," on Worton creek, near the Chesapeake Bay, 213 a., from Mr. Vannort, for $11,600, cash. This farm is beautifully situated and is highly improved, and has a nursury of about 4000 young trees. The buildings are large and in fine repair.—"Hill Top, 379 a., belonging to the late T. M. Blackiston, to Abraham Hurlock, for $40 01 per a.—total $15,163 19. George Vickers, Esq., as Trustee, has sold "Urieville," in Kent county, Md., for $7,500—Mr. R. Jeny, of Philadelphia, purchaser. *Prince George's Co.*—Washington C. Calvert, Esq., has disposed of his farm, adjoining Mt. Airy, about 320 a., to James B. Belt, Esq., at $55 per a. Sold at public sale a tract of land near the Contee station, on the Washington railroad, containing 140½ a. It is known as "Snowden's New Birmingham Manor," and was purchased by William H. Ware for $45.50 per a. C. H. Stephen, Esq., as Executor of the estate of the late Dr. Penn, sold the farm belonging to the estate, situated near the village of Bladensburg, for $120 50 per a. The place contained about 160 acres, and was purchased by Mr. J. P. Magill, of Anne Arundel county. *Talbot Co.*—At the sale of the real estate of the late Dr. Nicholas Hammond, on Tuesday, "St. Aubin's," the home place, near Easton, was not sold, as the bids failed to reach the estimate placed upon the land, which we understand was $100 per a. The tract of land adjoining Mr. Howes Goldsborough's, containing some 200 a., was

purchased by J. B. Bennett at $20.62 per a. The town property was not sold.

VIRGINIA.

Culpeper Co.—Thos. H. Fitzhugh, has sold his farm, 215 a., to Mr. Baxter, of New York, at $22 50 per a. *Norfolk Co.*—The "Tatan Farm" in Bear Quarter, about 12 miles from Norfolk, about 1000 a., about 300 a. high land, the balance swamp, to John West, Esq., for $6,000.—*Rockingham Co.*—The farm of the late John Pirkey, Sr., at $50 per a. There are no improvements upon the land, and a part of it has been turned out as commons. This, considering the time, may be regarded as a first-rate sale.

Poultry.

The following is furnished us by Mr. J. Jacob Bower, of this city, well known as a bird and poultry fancier, who imports a number of very curious things in his line, and is a thorough enthusiast. He proposes to give us items of interest in this way, from time to time, which his familiarity with ornithology and personal interest in such matters will make interesting in our Poultry department.

WHITE SPANISH FOWLS.—From this variety we have reared the best Spanish specimens, says Mr. Dixon. The Spanish race is one of those permanent ones to which the attention of the amateur of poultry has long been directed. In England the original stock has met with several crosses, more or less resembling one or the other of its progenitors, and in the course of time a name has been appropriated to these varieties as though they each were a separate species. The very slightest deviation from the assumed perfections of symmetry or plumage, or any esteemed characteristics, disqualifies poultry competitors. Perfection is now expected, and specimens deficient even in the least important particulars have no chance of success. The superiority of the Spanish generally as egg producers is so decided, that any cross from them is greatly disliked by breeders. The colour of the Spanish egg is clear white; its surface very smooth. Nine of these eggs are sufficient for hens of ordinary size, as they are much larger than the generality of fowl's eggs. Spanish hens seldom exhibit a disposition to undertake the task of incubation; since, therefore, they will not undertake the office, we must impose it on some other class of fowls. Mr. Nolan, of Dublin, is so enamoured of these noble Spaniards, that he considers it a grievous offence against economy to have the time of a Spanish hen taken up with hatching and rearing chickens, when she might be adding to the stock of her own kind by laying eggs, which could be hatched by deputies of less distinguished birth. As to healthiness, they are less liable to disease than are most of the common fowls. The beautiful milk white feathers are relieved by a healthy vermillion comb; with sparkling, joyful eyes. When kept in good airy and healthy situations, they have a very pleasing appearance.

GREAT CROWNED PIGEON, (*Columba Coronata.*)—This is the largest bird of this order known, exceeding a turkey in size. Its beak is black, and from its base arises a streak of that colour, which passes through the eyes as far as the hind head; the head is ornamented with an erect superb circular crest; the feathers of which it is composed being upwards of four inches and a half in length, of a loose texture and of a fine pale blueish ash colour; the rest of the head, the neck, breast, belly, sides, thighs, and under tail coverts, gray blue; the rump and upper tail coverts deep ash; the back and scapulas the same, with a mixture of purplish chestnut, as are also the tips of the lesser wing coverts; the greater ones nearest the body, ash coloured within and white on the outside, and tipped with purplish chestnut; the quills deep dark ash, tail the same, but paler at the tip; the legs are dusky, the irides red. This bird has many of the manners of the common pigeon—billing, inflating its breast, and cooing. Its note is, however, so loud at times as to resemble a kind of lowing. They are easily tamed, and in the East Indies are kept in court yards as poultry. They inhabit the Moluccas and New Guinea.

WHITE PEACOCK, (*Pavo Crustatus, Var. albus.*)—This splendid and magnificent bird is a native of India. The whole of the plumage of a pure white colour, the eyes of the train not excepted. Without doubt this is the most elegant and beautiful of the feathered creation—the elegance of its form not being exceeded by any in the neighbourhood of the Ganges and the extensive plains of India. It occurs in the greatest profusion. A pair of these beautiful birds was imported from London by the writer. Mr. Edward F. Jenkins has also imported a pair, which he has at his beautiful villa in Baltimore county.

[For the American Farmer.]

Cheat, Dike, or *Darnel,* for the pest is known by all these names, and perhaps more, is surely a mystery. In 1858, between the 25th of September and the 12th of October, I sowed a crop of wheat on very good land, part fallow and part corn land. My seed being indifferent and containing some cheat, I fanned it as clean as possible and passed it through strong brine, which floated out all the light wheat and nearly all the cheat. The last crops of wheat on the same land were clear of cheat, and the present crop is full of it, and the best land has the most cheat. At the same time I sowed a crop on another farm, on inferior land, with the same seed, without brining, and containing a considerable quantity of cheat and all the light wheat. Now this last named crop has very little cheat compared with the other one. All my wheat was alike injured by the excessive winter rains.

Last fall my son sowed a patch where cheat never was before, with seed gleaned by hand in 1857, and very good. No manure but ashes was used—the folws eat the wheat during the winter, and now a goodly quantity of it is cheat. These are the facts, and any one who can, may account for them. E. A. C.

Lancaster Co., Va., June 14, 1859.

P. S.—The wheat has the red rust—the cheat is free from all disease. E. A. C.

[For the American Farmer.]

No. 1.

Examination of Soils.

MESSRS. EDITORS: It has become a very general thing for our farmers to apply lime to their land, and the remark is constantly heard, that "this land has been limed," so much to the acre, or so much to the farm. Its adaptability is seldom or ever questioned; its appropriateness is assumed as a settled matter, and its fertilizing powers pointed out as beyond all cavil. It has come to be regarded as a panacea for all terrestrial difficulties and embarrassments in the way of raising good crops, and by universal opinion, seems to stand in the first rank as an agricultural stimulant. That it is of great value the writer does not question, and perhaps no *one* article used for farming purposes is so easily obtained, and at so little cost, but still we cannot admit that it is so essential or indispensable *on every kind of soil*, as farmers generally believe, and indeed we are fully persuaded that in many instances it is neither necessary or useful. If, then, it may be rather injurious on some soils, or at all events of doubtful benefit, would it not be far better for our farming interests, and much more scientific, if before applying lime (or any other fertilizer) we should examine into the composition and character of the soil? What are its ingredients, or rather its component parts?

Now there is no sort of doubt as to the propriety or necessity of instituting this examination, and it is quite probable most of our farmers would do it for themselves if they knew how. But, says our neighbour S., what is the use of asking farmers to *analyze* the soil of their farms? They are not chemists. Very true, but we don't require a *chemical* investigation or analysis, that's too elaborate. We merely propose an examination sufficient for the purposes of the farmer, and which can be followed by any man of ordinary information. Before he applies lime or anything else, it will be highly useful to him to ascertain the *capacity* of his soil for the absorption and retention of water, its specific gravity when compared with that of pure water, (thus indicating its fertility,) and the separation of the fine from the coarser parts. The process is that so clearly given by Mr. Rham in the Journal of the Royal Agricultural Society of England.

A portion of the soil to be examined (say a pound) is dried in the sun or near a fire, until it feels *quite dry* to the hand. It is then reduced to powder by the fingers, or with a wooden roller on a hard clean table, so as to separate the particles but not to grind them; all small stones *above* the size of a pea must be picked out. If these stones form a considerable part of the soil, their proportion must be ascertained by weight; their nature and quantity must be afterwards examined. Where the stones or pebbles are evidently accidental, they may be overlooked, as having little influence on fertility.

The dry earth cleaned from the stones, should now be carefully weighed in a determined quantity, as 1000 or 500 grains, according to the accuracy of the instruments. This portion put into a shallow earthen or metal vessel, and heat it over a lamp or fire for ten or fifteen minutes, stirring it all the time with a chip of dry wood; the heat must not be high enough to scorch the wood. Let it now gradually cool, and then weigh it again: the *loss of weight* indicates the *water* which remained *uncombined* after the soil *appeared* quite dry: this is the first thing to be noted.

The dry soil is now to be sifted through metallic sieves of different fineness, six inches in diameter, and made to fit into one another like the filterers in a coffee-biggin, the last or finest fitting into a tin pot which will hold a pint of water, and a cover over the top sieve. *Four* sieves is enough, the uppermost of perforated tin plate, the holes one-twentieth of an inch in diameter. The largest particles or stones are retained by this sieve, and the remainder passes successively through the others, increasing in fineness to the last, which is of the *finest* wire-cloth; whatever passes through this is an impalpable powder. By this simple method, any soil previously dried as directed is separated into four distinct parcels, and all the siftings done in one operation, by placing the dried earth in the upper compartment or sieve. Pour over this pure water—what runs through cleanses or washes No. 2 in the same manner, and then passes through No. 3 to the impalpable matter which passes all the sieves and remains in the tin pot or receptacle. You will now have three different portions of the washed soil left in the sieves, and a portion of impalpable matter diffused through the water in the lower division of the instrument. This fine matter is to be well shaken, and suddenly poured into a deep and narrow glass jar, and allowed to settle till all the heavier portions subside; then, the light *floating* soil is poured off cautiously into another vessel. This washing may be repeated till all the particles of sand visible to the naked eye are separated, but a little practice will enable a skilful operator to effect this at one operation.

In the "light floating soil," as above mentioned, is contained the *humus*, or that "wonderful manure" about which so much has been written and said by philosophers and agriculturists. To detach this, the earth and water decanted out of the *last* vessel are poured into a glass tube eighteen inches long and three-quarters of an inch in diameter, open at both ends; one end (the lower) stopped with a cork; the other having a small lip for the convenience of pouring out the contents. The tube resting quiet, an earth, chiefly *alumina*, will be deposited. What remains suspended in the water is to be poured into a similar tube, and this fluid will contain nearly the whole of the *humus*, some hours being required for its settlement in the form of a "*fine brown mud*."

The reader will have perceived that the power of retaining water is an important consideration in analyzing soils; a certain quantity may be held pertinaciously, without the least appearance of moisture, though this varies in different soils. Clay (*alumina*) possesses it in the highest degree, pure flint (*silex*) the least, therefore sands become rapidly parched and dry. Chalk retains water with great tenacity, hence where it prevails in any soil there is verdure and freshness, while the pastures and grass lands over clays and gravel, are scorched by the sun's power.

KENT.

Oak Hill, June 30, 1859.

What is said of the Farmer by those who know.

May we ask the attention of those who are not subscribers to the *American Farmer* to the testimonials following, from subscribers who have read and tested its value for years? They come voluntarily from persons in all parts of the country, and, almost without exception, personally unknown to the proprietor. We hope our agents will call attention to them.

"I cannot forbear again expressing to you my pleasure at the conduct of the *Farmer* in your hands."—*T. R. J., Accomac Co., Va.*

"I enclose you herewith $5, for five years in advance, and consider it a good investment."—*J. H. B., Culpeper Co., Va.*

"If I am in error as to the amount I owe, I will correct it promptly. I wish you to continue the paper, as I cannot do without it. Yours,

R. C. P., Warren Co., N. C."

"Please find enclosed $1 for a year's subscription. I highly appreciate the *Farmer*, and would not be without it for ten times the amount of subscription. Yours,

W. H. W., Anne Arundel Co., Md."

"I am very much pleased at the last number indeed; its appearance is greatly improved, and I hope you will meet with the success you merit."—*W. H. B., Dorchester Co., Md.*

"We have not received the July number at our office yet, and are anxious to get them. We suppose the delay is because we did not renew our subscriptions earlier. Please forward the paper at once."—*A. C., P. M., Augusta Co., Va.*

"Having sent to the office several times expressly for my July number, I have been very much disappointed at not receiving it. If I am behind-hand, please let me know. I always look for the *American Farmer* with a great deal of pleasure."—*W. H. C., Lenoir Co., N. C.*

"I find so much of profitable instruction in its pages, that I cannot well do without it."—*W. J. C., Kent Co., Md.*

"Please place the name of Mr. —— on your list in place of mine, and forward the *Farmer* to him. I have sold my farm, and hope Mr. —— will read it with as much pleasure and profit as I have done."—*J. C., Fluvanna Co., Va.*

"The greatly improved appearance of the July number attests your enterprise, and I trust you may meet with the increased encouragement that you certainly merit."—*L. T. B., Washington Co., Md.*

A friend at Richmond who takes two copies, and is already in advance, says: "Enclosed you will find $5, with which please credit my subscription. I congratulate you upon entering upon a new lease. I trust your highest hopes will be realized."

"Last June, when you became sole proprietor of the *American Farmer*, I took occasion to offer my best wishes for your success. All the year round I have been an attentive reader of the journal, and have observed with pleasure the ability and fidelity displayed in its management. I trust that both its editors and patrons are well satisfied with the year's intercourse; and for myself, shall not refrain from stating, that in each of the twelve numbers, I have found something of more value to me than the annual subscription."—*L. G., Anne Arundel Co., Md.*

"I send you $1 for the *American Farmer*, and will try to get others to do likewise. I regard it highly, and think it has been worth far more to me annually than five times the cost of it."—*C. S. S., Roanoke Co., Va.*

"Two years ago I purchased a little farm at $44.25 per acre, commenced a course of farming as best I could by the instruction of the *Farmer*. This spring I sold at $55.77 per acre."—*W. W. H., Lewisburg, Tenn.*

"I am not very certain as to the amount of my indebtedness to the *American Farmer*, but am quite certain that sooner than its visits shall be discontinued to my quiet domicil, I would willingly remit a second time. It is quite needless that so humble a personage as I profess to be should attempt anything by way of commendation of your very excellent journal; suffice it to say that I have been a very constant reader of its pages, and for real profit, would prefer to cut the acquaintance of some of my professed friends (personal) than be deprived of the monthly visits of my *really clever and social friend, the American Farmer*."—*R. C. J., Perquimans Co., N. C.*

"I appreciate very highly your labours in behalf of the agricultural interests of the State. I trust these labours will be well remunerated by the increased patronage and popularity of your valuable journal."—*O. H., Montgomery Co., Md.*

"I am sorry to inform you that I did not receive the June number of the *American Farmer*. I get five monthly agricultural journals, and yours I consider of more value to me than all of them. Please send it and oblige yours truly,

J. E., Lancaster, Pa."

"Your *Farmer* is a welcome visiter. Cannot do well without it—I have tried it. I can depend on the information I gather from it. The cash system is best. Go on, and you will prosper as heretofore."—*J. J. B., Orange Co., N. C.*

"Enclosed you will find $1 to pay for the *American Farmer* in advance, and you may be certain if its quality continues as at present, I shall be a subscriber while I live. I have put up your circular where it will attract notice, and on all occasions I speak highly of your journal."—*E. J. P., Accomac Co., Va.*

"I send you herewith the money for six new subscribers. I feel interested in the success of the *Farmer*, and hope every last year's subscriber has done as I have. Yours,

C. W., Roanoke Co., Va."

"I regret not having sent the $1 earlier, especially at this time, as I am very unwilling to have it supposed that I do not want the *Farmer* at one dollar a year. It is worth ten dollars a year to any one who owns an acre and properly cultivates the same."—*G. P. N., Wilmington, Del.*

Tomatoes.

Some years ago we recommended to our readers to trim tomatoes, and we have found no cause for changing our practice. The plant bears eighty per cent of its fruit within eighteen inches of the ground, while more than half of the plant is above that part. When the branches are cut they do not bleed, and they may therefore be shortened in immediately above the large or early setting fruit—The removal of the small fruit on the ends of the branches is no loss, for the lower fruit will swell to an unusual size by the trimming, and both a greater weight and measure of fruit will be the consequence, beside obtaining a larger portion five to fifteen days earlier. The trimming should be so done as to leave a few leaves beyond the fruit, to insure perfect ripening. When tomatoes are first brought to market they bring frequently $4 per basket, and in ten days fall in price to 50 cts. The importance of early maturing is too evident to need comment. The burying of the removed portions immediately around the plant is a good practice, both by insuring full disturbance of the soil, and by the presenting a fertilizer progressed precisely to the point of fruit-making. The portions buried decay rapidly, and are readily assimilated.—*Working Farmer.*

Prospectus of the American Farmer.

A Monthly Magazine of Agriculture and Horticulture.

THE AMERICAN FARMER, the first number of which was issued in April, 1819, will commence with its present number, the First Volume of a new series. In its first years *The Farmer* was the only Agricultural Journal in the United States, and it claims the credit of an important agency in opening the way to the great improvements in agriculture, which characterize the present times. Its aim now is to hold a place among many valued allies, as a useful, safe, and reliable guide to those who seek instruction, and to gather from all sources the best information to be obtained on the subjects of Agriculture, Horticulture, and Rural Improvement generally.

The Editors having been from their earliest years familiar with Southern farm life, and by their personal experience acquainted with the agricultural practice of the Middle and Southern States, are enabled to adapt *The Farmer* especially to the peculiar wants and capabilities of the Tobacco, Grain and Stock Growing Regions, while they hope to make it more acceptable even than it has heretofore been to the friends of agricultural improvement in all portions of the country.

The *Farmer* is printed in magazine form and style, each monthly number containing thirty-two pages of well printed matter, and a large advertising sheet giving the reader a view of the whole market of *Agricultural Machinery, Implements, Fertilizers, Seeds, Nurseries, and improved stock of every sort*, not only in Baltimore, but other important points. For Southern country custom it is unsurpassed as an advertising medium.

Price $1 per annum, *in advance*. The paper will in all cases be stopped when the subscription expires, unless renewed. Address,

N. B. WORTHINGTON,
Carroll Hall, Baltimore.

Premiums Extraordinary—$700 in Premiums to Agents.

Competition open till 20th of August.

Having given assurance during the past year to the readers of the AMERICAN FARMER of a safe, practical, reliable Magazine, fully alive to all that is valuable in the progress of the day, but not carried away with new theories and fancies, the Proprietor designs now, with a new volume, not only to take further steps for the improvement of the "Farmer," but to give especial attention to a very large increase of its subscription list.

Having abandoned the old system of crediting, and allowing every one to pay when he chose, or not to pay at all if he were dishonest, he desires, now and hereafter, to substitute the plan of having agents through the Middle and Southern States, to canvass actively every neighborhood; and to remit payments in advance, with the express understanding that the paper stops when the payment ceases.

For this purpose, by way of inducement to Post Masters, farmers' sons and others, to enter with some spirit into his views, he offers the extraordinary premiums mentioned below. He does not doubt that many thousand names may be easily added to his lists, and he earnestly invokes every friend of the *American Farmer*, either to take hold of the matter himself, or to direct to it the attention of some suitable person in his neighborhood. There is not a village or small town in Maryland, Pennsylvania, Virginia or North Carolina, where an active agent may not hope to take the highest premium of *two hundred dollars*.

TERMS.

Single subscribers may remit at our risk, as heretofore, $1 per annum, payable always in advance.

Six copies will be sent for $5.

For ten or any larger number, the agent will receive a commission of 20 cents for each subscription of $1. Or clubs of ten or more may be formed, at 80 cents each.

PREMIUMS.

In place of the list heretofore offered in circulars with our May number, we now offer the following:

1st.—For the largest list, not less than two hundred, $1 each, we offer E. Whitman & Co's Double Geared Horse Power, and their Premium Iron Cylinder Thresher with bands complete, a well tried, substantial and favorite machine, price $200.00

2nd.—For the second largest list, not less than one hundred and thirty names at $1 each, Stetson's Mower and Reaper. This is a new patent, of simple construction, and promises to be unsurpassed as a combined Reaper and Mower. It is warranted by the reliable house of Sinclair & Co., as a first class implement, and got up in the best manner—price.....$130.00

3rd.—For the third largest list of not less than ninety names at $1 each, Bickford & Huffman's famous Premium Iron Cylinder Grain Drill. This Drill is so well known and highly approved as to need no commendation—price $90.00

4th.—For the fourth largest list of not less than fifty names at $1 each, Wm. L. Boyer & Bro's Farm and Plantation Mill, which has received a large number of first premiums and is highly approved where it has been used—price.....$50.00

5th.—For the fifth highest list of not less than thirty-four names at $1 each, one of J. Montgomery's celebrated Rockaway Wheat Fans. This Fan has taken five silver medals, besides a large number of first premiums, and is certainly unsurpassed—price $34.00

6th.—For the sixth highest list, not less than thirty names, one of Sinclair & Co's Straw Cutters and Corn Stalk and Sugar Cane Masticators, an excellent machine, that mashes the stalk between rollers armed with teeth, and then cuts it into short food for stock—price.....$30.00

7th.—For the seventh highest list of not less than twenty-two names, one of E. Whitman & Co's United States Premium Sub-Soil Ploughs, very highly commended, worth $10—one of E. Whitman & Co's admirable Wire Tooth Gleaners $12.....$22.00

Those who take the above Premiums will be required to pay the full subscription price of $1 for each subscriber. All others will be entitled to 20 per cent. commission in addition to the cash premiums they may take.

8th.—For the eighth largest list, a cash premium of.....$20.00

9th.—For the ninth largest list, a cash premium of $18.00

10th.—For the tenth largest list, a cash premium of.....$17.00

11th.—For the eleventh largest list a cash premium of.....$16.00

12th.—For the twelfth largest list, a cash premium of.....$14.00

13th—For the thirteenth largest list, a cash premium of.....$12.00

14th.—For the fourteenth largest list, a cash premium of.....$10.00

15th.—For the fifteenth largest list, a cash premium of..... $8.00

16th.—For the sixteenth largest list, a cash premium of..... $6.00

17th.—For the seventeenth largest list, a cash premium of..... $5.00

18th.—For the eighteenth largest list, a cash premium of..... $4.00

19th.—For the nineteenth largest list, a cash premium of..... $3.00

20th.—For the twentieth largest list, a cash premium of..... $2.00

TO AGENTS.

☞Bear in mind that the system we have now adopted of offering premiums, we design to continue from year to year. So that the same list that you get now, may be added to and used another year in competing for premiums thus offered.

☞Let every subscriber understand that his subscription is for one year, and will stop there certainly, unless paid for again.

☞It is very desirable that you remit promptly, whenever you have as many as five names, in order that by the first of July some idea may be formed of the number of copies we should print. An account will be opened with each agent, in which he will be carefully credited with the number of names sent with each remittance.

☞In all cases the money must be sent with the names.

☞Write distinctly, name, post office, county, and State of each subscriber. Your lists need not be confined to one post office.

☞In order to give ample time for canvassing, we will extend the time for competing to the 20th of August, when the accounts will be closed, and the premiums awarded.

☞The names of old as well as new subscribers may be put upon your lists.

☞There is scarcely a village or small town in Maryland, Virginia, or North Carolina, or Pennsylvania, where an active agent may not hope to take the highest premium of $200.

☞Take notice, that every agent, whether he gets a premium or not, gets a commission which fully compensates for any trouble he may take.

☞The Implements offered are all considered first class of their kind, and the sum attached to each, is its price in the Baltimore market. Should the one he gets not be wanted by a successful competitor, it can no doubt be sold or exchanged for its value in other things.

Wool.

The fluctuations in the market values of Wool during the year 1858 and the first four months of 1859, are indicated in the annexed summary:

1858.	Saxony Fleece.	B. Ayres Saxony.	Cape of Good Hope.
January	40a43	35a38	20a24
February	40a43	35a38	20a24
March	40a43	35a38	20a24
April	42a45	35a38	20a24
May	42a45	35a38	20a24
June	42a45	35a38	20a24
July	42a45	35a38	20a24
August	43a47	35a38	20a24
September	44a48	35a38	25a28
October	44a48	35a38	25a28
November	47a50	35a40	25a28
December	50a55	38a43	27a31
1859.			
January	52a57	38a43	28a33
February	52a57	38a43	28a33
March	52a57	38a43	28a33
April	53a57	38a43	28a33

Mr. Sessions of Ohio has bought about 150,000 pounds of wool, from 30 to 45 cents, and a few extra clips at 50 cents. Manufacturers and dealers do not seem inclined to pay the prices asked by growers, and a large amount of the fine wool will probably be stored—farmers being sure of getting their price. Prices now offered, common to quarter blood, 30a33 cents; quarter to half blood, 33 to 37½ cents; half to three-quarters, 37½ to 43 cents; three-quarters to full blood, 43 to 47 cents; extra, 50 cents.—*Columbus (Ohio) Gazette.*

Baltimore Markets, July 23.

COTTON.—The demand for Cotton has improved. Since the Africa's advices, holders are asking an advance. We quote from 12 cents for Middling Upland to 13¾ cents for Gulf.

FEATHERS.—We quote Feathers at 40 to 45 cents per lb.

FISH.—No. 3 Mackerel $8.50 to $9 for old, and $9.50 to $10 for new, No. 2, $14 to $15; No. 1, $16 to $16.50. Halifax Herrings $3 to $3.50; Labrador $4 to $4.50; Alewives $5 to $5.50; Box Herrings at 18 to 40 cts. per box.

FLOUR.—*Howard street.*—150 bbls. new Flour sold at $5.50 per bbl.

Ohio.—New extra dull at $5.50.

City Mills.—We quote City Mills superfine at $5.50; extra $6.

Family Flour.—We quote the several brands of Family Flour at $7.75; extra $7.25.

Rye Flour.—Rye Flour dull at $4.25.

Corn Meal.—City Mills $4.12½; Brandywine $4.37½.

GRAIN.—*Wheat.*—Choice white 130 to 135 cents; fair to prime 120 to 128, ordinary 115 to 120, red 115 to 125 cts.

Rye.—Maryland and Virginia 68 to 70 cents; Pennsylvania 78 to 80 cents.

Corn.—Yellow 80 to 83 cents; white 82 to 84 cents.

Oats.—Maryland and Virginia 30 to 33 cents; Pennsylvania 32 to 34 cents.

GUANO.—Guano, best Peruvian, $61 to $62 per long ton; California or Elide Island, $45 per short ton by dealers; Mexican AA, $20 to $22 per ton; Mexican A, $16; Sombrero, $32 per long ton; Colombian, $38 to $40 per long ton. Manipulated Guanos $47 per ton of 2,000 lbs., and Super-phosphates $45 do.

HAY AND STRAW.—Hay, $16 to $18 per ton for baled; $12 to $14 for loose. Straw, $12 to $14 for rye; $10 to $12 for oat.

PROVISIONS.—*Bacon.*—We quote Shoulders 7¾ to 8 cents, Middlings 9¼ to 9¾ cents, Hams 10 to 13 cents.

Bulk Meat.—Shoulders 6¾ cents, Middlings 8¾ cents.

Beef.—$13 to $15 for No. 1, $15 to $17 per bbl. for Mess.

Pork.—Mess $16.25; Prime $13 to $13.50; Rump $12.50.

Lard.—11¾ to 11¾ cts. for prime Western leaf in bbls.

Butter.—11 to 12 cents for solid packed Western; 12 to 14 for roll, and 12 cents for city packed for shipping.

Tallow.—11 cents per lb.

TOBACCO.—We quote ground leaf $3 to $5; inferior to good common $3 to $4.50; ordinary to fair middling $5 to $6.50; good to fine $7 to $12. Bay Tobacco—tips $3.50 to $4; ground leaf $5 to 7; brown reds $8.50 to 9; fine yellows $12 to $16. Ohio—inferior to good brown $5 to $6; medium to good brown $6.50 to $7; good to fine brown $7.50 to $9; fine wrappery reds and yellow $10 to $15.

WOOL.—Unwashed 21 to 23 cents; tub washed 31 to 32 for common, 35 to 37 cts. for extra; No. 1 pulled 27 to 30; pulled Merino 33 to 36; fleece wools 30 to 45 cents per lb.

CATTLE MARKET.—Beef Cattle we quote at $3.25 to $5 on the hoof, averaging $4.12½ per 100 lbs. Hogs, $8 to $8.75 pet 100 lbs. Sheep, $2.25 to $3.25 per head.

NEW ADVERTISEMENTS.

We call attention to our list of new advertisements, and to all the various matters of agricultural interest presented in our advertising pages.

Allen & Needles—Super Phosphate of Lime.
Angell, A. H. & Co.—American Guano.
Allen & Needles—American Guano.
Ault, Samuel & Son—English Cabbage Seed.
Boulware, A. M.—Farm in Caroline Co., Va.
Boyer, Wm. L. & Bro.—Farm Mill.
Bibb & Co.—Stove House, &c.
Bowdoin, G. E.—Commission Business.
Daniels, E. B.—Landscape Gardener, &c.
Grange, W.—Bone Dust.
Grover & Baker—Sewing Machines.
Greenway, J. H.—Removal.
Greenway, J. H.—Important arrangement.
Glenn, John—Alderney Heifers and Bulls.
Hickok, W. O.—Cider Mill.
Hartsook, D. J.—Farm on the Rappahannock.
Jones, John—Tile and Pipe Machine.
Key, F. S.—Farm in Howard Co.
Kettlewell, John—Manipulated Guano.
Langhorne, C.—Farm in Botetourt Co., Va.
Malcom, P. & Co.—Peruvian and Californian Guanos.
Norris, Thomas—Apple Paring, Coring and Slicing Machine.
Plaskitt, John—Farm in Baltimore Co.
Pearce & Gray—Mexican Guano.
Pullen, Isaac—Hightstown Nurseries.
Pitt, Thomas I.—Guano Inspections.
Poe & Howard—Sash Factory.
Richardson, Wm.—Wilson's Seedling Strawberries.
Rogers, C. B.—Seeds, Phosphate of Lime, &c.
Stickney, H. F. & Co.—Wines, Brandies, &c.
Sinclair, R. & Co.—Dissolution of Partnership.
Stockett, Dr. C. W.—Horse Claude Meinotte.
Smith, Peter C.—Farm in Culpeper Co.
Sinclair, R. & Co.—Wheat Fans.
Turner, J. J. & F.—Peruvian Guano, &c.
Washington, John A.—Farm in Charles Co.
Whitman, E. & Co.—Cylinder Thresher and Drills.
Zell, Peter & Son—To Farmers and others.

CONTENTS OF THE AUGUST NO.

Farm Work for the Month..33
Garden Work for Month..35
Orchard—Nursery..36
Floriculture..36
Management of Flock of Merinos by W. D. Wallach..37
Insects, by P. R. Uhler..39
Turnip Culture and Stock Raising, by Wm. H. Sotham..40
Sheep from New Mexico..40
"Jots and Tittles" by a "Well-Wisher"..41
Qualities and Properties of the Earth, by Dr. R. T. Baldwin..42
Dana's Seedling Pears..43
The Honey-Bee—Pollen or Bee-Bread..45
Henry Ward Beecher Agriculturally considered..47
Editorial Notices..48, 49
Herefords..49
Sheep Discussion..49
Japan Wheat..50
Ruta Baga Turnips..50
Acknowledgments..51
Cranberries..51
Boughton Wheat..51
Md. Agricultural College..52
Grass Seeds for a Lawn..52
To Prepare Ground in the Woods for Grass..53
Crops and Prices..53
Peruvian Guano..53
Cotswolds and Merinos, by Col. J. W. Ware..54
Grasses—To Keep them Fresh..56
Management of Breeding Cattle..57
Purplish Japan Maple..58
Fish Rearing..58
Charcoal for Gardens..60
Land Sales..62
Poultry..63
Examination of Soils..64